Manures and Manuring.

HOW to prepare and apply manures is a matter in which every cultivator of the soil must feel deeply interested. It matters not to what expense and trouble we go to procure the finest fruits or vegetables, and the most beautiful trees, shrubs, and flowers; or with what excellent taste we may arrange our parterre; unless we furnish the soil with such quantities and kinds of fertilizing materials as will ensure a vigorous, luxuriant, and healthy growth. The agriculturist may stock his farm with the purest and best blood of animals that the world can produce, or he may plant the best improved grains and grasses or root crops that money will purchase; but without judicious and liberal feeding in the one case, and skillful, thorough culture in the other, he will be no better off in the end than his neighbor, who has remained satisfied with such stock and such seeds as he could most easily and most cheaply procure. This every one will cheerfully admit in theory, but a great many deny it in their practice; and thus the obstinate opposers of improvement and progress have been furnished with their strongest arguments. Here, they say, are Mr. Brown and Squire Jones, who have spent fortunes in collecting new and fine things from all parts of the world — they have every known variety of fruit and flowers — they have employed celebrated gardeners to lay out their grounds, and have spent thousands upon labor; and what have they? Why, they have to come over here to us and purchase a supply of fruit for their families; and the old lady across the way, whose garden is a mere patch, and who does all her own work, can show more and finer flowers than they can any day in the year! This is not an imaginary case; we have repeatedly heard these remarks, and had occasion to regret the pernicious influence of such examples. On the other hand, we could point to instances where a single example of a small garden successfully cultivated, has awakened an entire village and neighborhood, and set them at planting and gardening with the greatest enthusiasm — and upon the right principle.

One of the very first matters that should occupy the attention of persons embarking in horticulture, whether on a large or small scale, should be the preparation of his soil. This ought to be the starting point; and there is probably no other item in the entire routine of culture in regard to which beginners find themselves so puzzled, or so completely in the dark. If every crop and every soil could with propriety be furnished with the same quantity and kind of manures or fertilizers, it would be a simple matter; but such is far from being the fact. What may be fit and proper for one soil and one sort of crop, may be utterly ruinous to others; and therefore a great degree of judgment and discrimination becomes necessary. Much may be gathered from the instruction of books and the experience of others; but local circumstances, apparently trivial, exert such a weighty influence that nothing save actual experience

with our own soils can afford an unerring and perfectly reliable guide. This we have found true in our own practice. We have no hope, therefore, in being able to write anything that every man may carry out to advantage, and will merely aim at directing attention to certain well established facts and principles that may aid in putting the inexperienced on the proper course.

One great error, and, as we believe, a very prevalent one, is that of applying the same kind of manure to the same soil for a great number of years in succession. We will take, for instance, town and village gardens, and see how the case is with them. A cow and a horse, and perhaps a pig, are kept on the premises, and whatever manure they may produce, or such a quantity of it as may be considered necessary, is annually applied to the garden without any admixture of other material, and, in most cases, without being very properly prepared beforehand. At the same time, the ground is cropped with the same articles year after year with very slight variations. By and by the crops begin to fail; and the wonder is *why*, with such a liberal manuring every year. But it is not at all wonderful. We have seen lime, marl, sea-weed, and other fertilizers produce the most abundant crops for a few years, and then cease to have any good effect, but rather to be injurious. Thousands of gardens are defective, not from the want of manure, but from the too frequent application of one material. People are not thoughtful or careful enough in saving the waste materials of gardens and kitchens to add to the manure heap. The more vegetable refuse that can be returned to the garden, the less will strong animal manures be needed. Leaves, the dry stalks and waste parts of vegetables, weeds, mowings and sweepings of lawns, prunings of trees, clippings of hedges, if thrown in a heap and mixed with a little manure, lime, turf from an old pasture, muck, or peat, &c., would make one of the very best composts for gardens, whatever might be the character of the soil or the crops grown on it. They return to the soil the very same substances of which it has been deprived by crops, together with others taken from the atmosphere. Such a compost is far preferable to strong stable manure, for trees especially, and may be applied with entire safety even in fertile soils, where it might be considered that manure of any kind was wholly unnecessary. The finest garden crops, and the most vigorous, healthy, and fruitful trees we know of, are those of poor cottagers who keep no animals and have no manure but such as they scrape up in the form of refuse. Their necessities compel them to follow a system of preparing manure that every one should adopt from choice. A dressing of wood-ashes occasionally is of great value. The alkali they contain is not only useful to the soil, but destructive to grubs that infest it. Soot is also valuable in this respect, and it is a point of some importance; for when animal manures alone have been plentifully applied for a number of years, grubs become so numerous as to render the garden nearly worthless. The best way to apply these substances is, to spread them over the ground in the fall or winter, and spade them under; before spring comes they are rendered perfectly harmless. Bones, either in a fresh state or from the glue factory, make a valuable application to gardens, and especially to fruit trees. If ground to a powder, or dissolved in sulphuric acid, they produce an immediate effect; but if simply broken in pieces, or spaded into the

ground, they have a gradual and permanent effect. In taking up trees from soil where bones have been used as manure, we find every particle within reach of the roots completely enveloped in masses of fibres. Guano, superphosphate of lime, and other prepared manures, are becoming extensively used, and will be advantageous to persons who have extensive grounds to enrich, with limited means of procuring or making manure. Those who have but small gardens have the means of making all the manure they require, and that, too, of a kind which we would prefer either to guano or any of the patent manufactured compounds.

The manner of applying manures and the time to do it require careful consideration. In this country, where we have excessive heat and often excessive drouth in summer—and that, too, at an early period of the summer—solid manures and composts of every kind should, as a general thing, be applied in the autumn; so that during winter and spring they may be dissolved and fitted to yield nutriment to plants when active growth commences. Every experienced cultivator knows that to have a good crop, or a good growth, it must be made early in the season; and therefore the supply of nutriment should be ready in abundance when growth commences and the greatest activity prevails. Solid manures applied in the spring will probably remain dry and useless all summer—and, indeed, are more likely to prove injurious than otherwise. There are, of course, exceptions to this in the case of certain garden crops of succulent nature, that may with advantage be stimulated with fresh hot manures in connection with a liberal supply of moisture. One of the best methods of maintaining the soil around trees in good condition is to apply every autumn a top dressing of compost. The snow and rains of winter and spring dissolve and wash down its most soluble parts, and place them within reach of the roots by the time they are ready to take it up. At the same time this top dressing affords protection to the roots against the changes of temperature during the winter and spring months. There is, to be sure, some loss in this way of using composts, as a considerable portion is lost by evaporation; but its advantages are a sufficient offset.

In preparing and applying manures our aim should be *first*, to have it adapted, as nearly as possible, to the nature of the crops to be grown and the defects of the soil. *Second*, it should be applied in such quantities as the soil and the plants may require. There are certain garden crops that can scarcely be over-fed, while fruit bearing trees and many flowering plants may be ruined by excessive stimulants. *Third*, it should be applied at such seasons as will place it in proper condition to yield the largest amount of nutriment during the early periods of growth. These are the main points, and a volume might be written upon them. Our remarks now are merely intended to draw special attention to their importance.

CHERRIES.

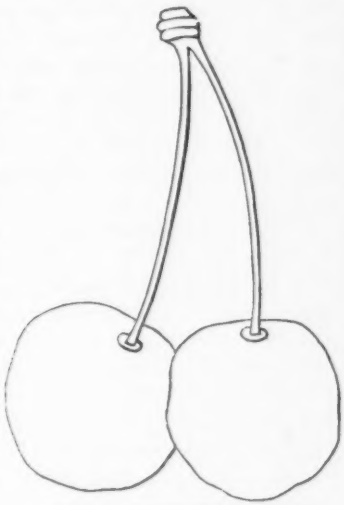
The Cherry is a highly popular fruit in this country—planted much more extensively, we think, than it is elsewhere. One reason for this is, that the Heart and Bigarreau varieties are generally rapid growing, beautiful trees; and are, on that account, regarded as being suitable for fruit gardens and door-yards, where shade and ornament are sought for as well as fruit. Another reason is, that it thrives and bears well in a great variety of soils and situations, and over a very large portion of the country. A third and very strong reason for its general cultivation is, that it ripens early, while fruit is scarce; and forms a cooling, healthy, and agreeable dessert in the warmest weather of the year. On all these accounts, as well as others, the cultivation of the Cherry has assumed an importance here that it never has in any other country. We might be safe in saying that one nursery in the State of New York grows and sells more Cherry trees in one season than the whole of England or France.

The most extensively grown varieties are still of foreign origin, such as the *Black Tartarian*, *Black Eagle*, *Yellow Spanish*, *Elton*, *Knight's Early Black*, *Napoleon Bigarreau*, *Early Purple Guigne*, *May Duke*, *English Morello*, &c. Among those of American origin the *Downer's Late Red* has, no doubt, been the most widely disseminated, and it may be justly considered as one of the leading sorts. *Coe's Transparent*, *Burr's Seedling*, *Manning's Mottled*, *Madison Bigarreau*, *Gridley*, *Wilkinson*, *Sparhawk's Honey*, and some others, have been planted but sparingly, and only as a general thing by way of making up collections. Among Dr. Kirtland's list of fine seedlings the *Gov. Wood* and *Rockport Bigarreau* have already acquired deservedly a great popularity, and several others of his will be highly prized, we doubt not, as soon as they become known.

The last number of *Hovey's Colored Fruits* has a portrait of a seedling variety, produced by Messrs. Hovey & Co. It is called the "*Hovey*," and is described as a very large and beautiful amber colored cherry, mottled with brilliant red. Tree vigorous, upright, and pyramidal in its growth, and a profuse bearer. Ripe middle of July to beginning of August. This, according to Mr. Hovey's description, must be a valuable acquisition. At this rate we shall soon be able to make a very respectable catalogue of American cherries. But what we most want are varieties of the Duke cherries that will bear the climate of the north, and of the south, and west, where the Heart and Bigarreau classes fail. We hope the attention of persons who are experimenting with seedlings will keep this in view. Hardiness is a point of the utmost importance. At the present moment, after all that has been done, we know of no cherry of such universal utility as the *May Duke*.

Among the large quantities of new foreign fruits we have received but a small number of cherries. The *Belle d' Orleans* is an acquisition, being among our earliest sorts, ripening with *Bauman's May* and *Early Purple Guigne*, and being light

colored, is not so much attacked by birds. It is also a very beautiful and delicious fruit. The *Bigarreau Monstreuse de Mezel*,* of which we give a portrait this month, proves to be a large, productive variety; and, as the fruit is firm, valuable for marketing. The tree is a very strong, irregular grower—more so than the *Elton*, or any other variety we know of; and, as far as we have observed, quite hardy. Fruit—very large, larger than *Black Tartarian*, obtuse heart-shaped, with an uneven surface. Stalk—long and slender. Color—dark mahogany. Flesh—firm, somewhat like the *Tradescant's Black Heart*, juicy, and agreeable, though not highly flavored. The fruit is produced in very large clusters. Ripe, at Rochester, latter end of June and beginning of July—usually lasts to the middle of July.



BIGARREAU MONSTREUSE DE MEZEL.

PRUNING AND MANAGEMENT OF THE PEACH TREE.†

In August last, Mr. F. Malleson, Gardener to His Majesty the King of the Belgians, at the Royal Gardens, Claremont, having seen M. Lepere's trees, expressed himself as having been highly gratified with their fine appearance. "There was not," he states, "a blight of any description upon them, and they were loaded with fruit. M. Lepere's system of training is the best I have ever seen." It has, therefore, been considered advisable to give the following translation of such parts of his work as will enable the horticulturists of this country to understand his system, so much approved in France and elsewhere on the continent. It is certainly desirable that every gardener should know the best French mode of managing the Peach tree, and that he should perfectly understand the principles contained in the following pages, in order that he may turn them to account in improving the trees that are, or may be, committed to his care. That there are in many gardens in this country Peach trees requiring to be improved, is a fact that can not be denied. Errors in management will appear more evident to any one who may read the following paragraphs; but whoever will attentively study the excellent instructions which they contain, must feel assured that he can, in consequence, effect great improvements, not only in the training of young

* See Frontispiece.

† According to the method of M. Alexis Lepere, of Montreuil, near Paris. Translated for the *Journal of the London Horticultural Society* from his work, *Pratique Raisonnee de la Taille du Pecher, principalement en Espalier Carre.*

trees, but also with respect to those that have been already established, under whatever mode of training they may have been conducted.

1. The Peach tree, planted under favorable circumstances, shoots vigorously, and its vegetation is very active from the first fine days in spring till about the middle of October. Such are its vegetative powers, that, during this time, it is continually making fresh shoots which require a constant and judicious superintendence, if we wish to manage properly, and this greatly depends on stopping in time those growths which are not likely to suit our purpose.

2. As soon as the genial influence of spring is felt, the buds swell, and very soon the flowers come out; while the leaves, more backward, are yet within their envelopes. Afterward the leaf-buds open their scales, and the shoots burst forth, to become, the following year, branches of greater or less length.

3. From May to August the leaves, coming successively to maturity, acquire a more compact structure, and consequently absorb less sap. This, continuing to flow, seeks fresh outlets, and produces, at the axil of the leaves, buds which remain as such, or break into laterals, according to the time of their formation, the continuance of fine weather, and the vigor of the tree.

4. These new productions, all formed in the course of the growing season, are easily seen at the fall of the leaf. They are the source from which our hopes of future crops arise; and as it is necessary to know them well, I therefore proceed to explain them in detail.

5. A. *Eyes or Buds.*—These are envelopes containing the rudiments of shoots, leaves, flowers, and fruit. They are conical, and covered with little imbricated scales, more or less coriaceous, and which are merely abortive leaves dried by the air, so as to protect the tender parts which they enclose from the severities of the winter. They continue in this state as long as the flow of the sap is arrested by the cold; and they commence growing when the weather becomes sufficiently warm to put the sap in motion.

6. If the eye does not receive proper nourishment it may remain a long time inactive; it is then called a *latent bud* (œil expectant). It is generally roused from this dormant state by pruning, performed with the view of calling it into action; or naturally, by an increased flow of sap which acts as a stimulus to it; otherwise, it may become completely extinct.

7. Buds become either *wood-buds*, or *fruit-buds;* and it is important for the operations of pruning to distinguish well these two conditions. I may, however, remark, that with reference to the Peach tree, the nature of the bud is never doubtful to an experienced person. In fact, its form, its place, the age of the wood on which it appears, all help to show the function which it is destined to perform; but for those little acquainted with this tree, it is necessary to enter more into detail.

8. *The wood-bud* (Figs. 1, 2, 3, 4, 5, *a*) is an embryo shoot, covered with imbricated scales of a reddish-brown. Its form is usually that of a little cone, more or less pointed; when in the axil of a leaf, it is always slightly compressed. The wood-bud, which is also called at Montreuil *œil de pousse* (pushing-eye), comes on all parts of

the Peach tree, upon the young as well as upon the older wood; and pruning can make it push from very old wood.

9. *Fruit-buds* (Figs. 1, *b*; 2, *c*; 3, *d*; 4, 5, *g*).—This contains the rudiments of the flower. It is also covered with scales; but its form is always rounder than that of the wood-bud. Fruit-buds are only found on one-year-old wood.

10. There are upon the Peach tree buds which are single, double, triple, or more numerous.

11. The single bud is in general a wood-bud, from which a shoot proceeds. We however see flower-buds by themselves; such are those marked *b*, Fig. 1.

Most commonly the fruit-branch that bears them is terminated by a wood-bud, or growing-point, the use of which is to draw into this branch the sap necessary for the nourishment of the flowers and fruits; but it may happen that by accident or abortion this eye does not exist; yet the loss of the fruit may not result. In 1844 I observed numerous instances of this, and further on I shall have to refer to them.

12. Double buds generally consist of a wood bud and a flower-bud. Fig. 2 shows this kind of buds: *a*, wood-buds; *c*, flower-buds.

13. In the triple buds, such as are seen at *d*, Fig. 3, two are flower-buds, the other a wood-bud. There are also triple buds which consist of three wood-buds. But this sort does not show itself except on the shoots of young Peach trees, or on those that are very vigorous. It is always the middle eye that is the strongest; sometimes those at each side die off. I shall state, further on, the procedure adopted in pruning them.

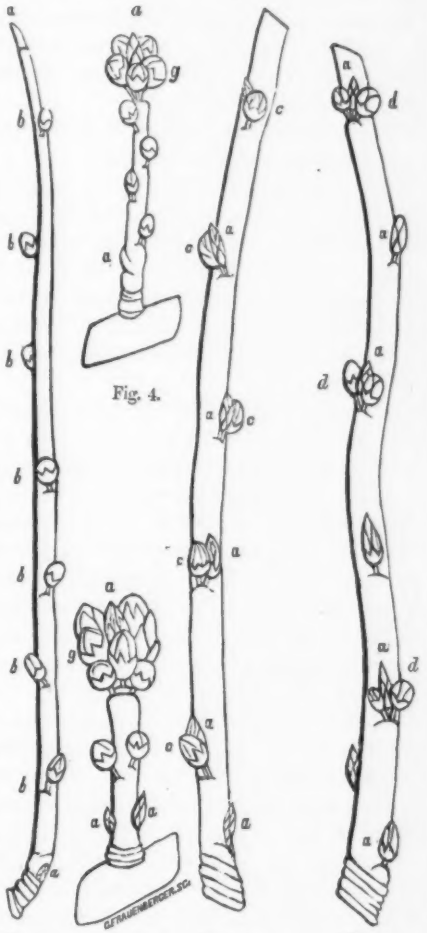


Fig. 4.

Fig. 1. Fig. 5. Fig. 2. Fig. 3.

14. Quadruple buds, although they appear as such, have always in the midst of them a pushing-eye that is at first hardly visible, which leads one to believe that it is

absent. The four prominent ones are all flower-buds; but the wood-bud that develops a little later has the same functions as the *œil de pousse*, or growing-point (11); and from its presence these ought to be called quintuple. They are rare, and always at the end of a little branch or spur (Fig. 4). They are sometimes more numerous, and disposed in the same manner with a growing-point in the center (Fig. 5). The growing-point sometimes perishes without bad consequences to the fruit.

15. When no accident occurs to the fruit-bud, there results the opening of the flower, which, after having fulfilled its functions, sets a fruit, of which the growth and maturity successively take place.

16. The wood-bud produces all the woody parts of the tree; these, at first herbaceous, undergo several modifications, of which we must give some account.

17. B. *Of the Young Shoot* (*Bourgeon*).—The young shoot is the first state into which the wood-bud enters in continuing its growth. At first it is merely a cluster of two or three young leaves, which expand with the small herbaceous stalk that bears them; and a greater or less number of leaves form upon its length in proportion to its growth, which is sometimes very extensive. When the young shoot is vigorous, eyes situated near its point break out during its growth, and give rise to productions which receive the name of *summer laterals;* and which, at Montreuil, we designate *redrugeons.*

18. The young shoot is so called until its elongation for the season is terminated; after that it is termed a *rameau* [by the French; in England the qualification of *young* is no longer applied, and it is merely called a *shoot*].

19. C. *Of the Shoot* (*Rameau*).—It has been shown that this is nothing more than a young shoot in a more advanced state. Nevertheless, it is still distinguished from the young shoot, not by its strength only, but by the eyes with which it is furnished throughout its length. These eyes are at different distances, according to the vigor of the shoots. The latter vary in length from four inches to six and a half feet.

20. The shoot (*rameau*) preserves its name so long as the buds with which it is furnished remain unexpanded; but as soon as they commence to burst forth, in the following spring, it becomes a branch.

21. The false shoot, or lateral, bears the same relation to the shoot, or young branch, as the summer lateral does to the young shoot. In some respects the false shoot ought to be considered and treated the same as the shoot.

22. I admit but two sorts of shoots (*rameau*), namely: 1st, the wood shoot; 2d, the mixed shoot—that is to say, one for both wood and fruit.

23. *First sort.*—The wood shoot is adapted for the production of wood and leaves only. Its vigor is equally distributed, and the eyes with which it is furnished are of nearly the same size. It abounds in young trees, and occasionally the terminal shoots of older trees are of this description.

The over-luxuriant (*gourmand*), which is a strong shoot of the sort just mentioned, differs from it in its broad base, in its disproportionate growth, in its length, in its thickness, in its grayish bark speckled with brown, and in the distance of its eyes from each other, the lower ones of which are nearly obliterated, while those at the top are

large, drawing all the sap to themselves, and inclined to push out laterals. The over-luxuriant shoot shows a bad circulation of the sap, and is seldom found on any but very young Peach trees, or on those that are badly managed. It is most frequently taken off; but this should be done before it has attained too great a size; still there are circumstances, which I will point out, where it can be made useful by pruning.

24. *Second sort.*—The mixed shoot, as previously observed, is that on which both wood and flower-buds exist.

25. D. *Of the Branch.*—It is now understood that every shoot is, in general, the origin of a branch, on which, by the influence of pruning and the continuance of growth, the buds with which it is furnished break forth. Some of these buds give rise to young shoots only; others to both young shoots and flowers.

26. Hence it follows that, as I only allow of two sorts of shoots (22), I recognise but two sorts of branches, namely: 1st, the wood-branch; 2d, the fruit-branch. I make use of the latter expression because it is usually adopted, although improperly so, as branches bearing fruit only rarely exist on the Peach tree.

27. *First sort.*—The wood-branch is the second state of the shoot, of which all the buds are wood-buds. The first branches that a young Peach tree makes are of this sort, because, being nourished by a strong-flowing and as yet imperfectly elaborated sap, they can not, during the first year of their existence, give rise to any thing but wood-buds, which become successively young shoots, mature shoots, and branches. They afterward remain wood-branches during the life of the tree; and they preserve the power of producing wood-buds at any age, whatever may have been said to the contrary.

I dwell so much upon this fact, because it is hardly admitted; and many persons yet maintain that the Peach tree never forms shoots from the old wood.

Whatever be the mode of training, the wood-branches form the framework of the tree. They receive different names, according to their place; but I will speak of this in treating on pruning, having only to consider here the Peach tree, and the nature of its productions.

28. *Second sort.*—The fruit branch follows the mixed shoot (24), as has been seen, and is always borne by the wood-branches. It is of the greatest importance, for on it all hopes of a crop depend. We also call it at Montreuil the *small branch* (*la petite branche*), from the difference between its size and that of the wood branch. In fact, its thickness rarely exceeds that of a large quill. After having borne fruit it becomes a wood-branch, if not removed by pruning, in order to replace it by another of an age to bear.

29. The fruit-branches, beside their use of producing fine and good fruit, have another that is not without its interest, that of shading from the excessive heat of the sun both the fruit which they nourish and the bark of the wood-branches which bear them, and to which the nearer they are the better they protect.

30. Such is the account that I have deemed necessary to make of the manner in which the vegetation of the Peach tree is carried on. I have thought this necessary, in order to render more intelligible the explanations which I have to give on its pruning

In recapitulating what has been said, we recognise that all growths in this kind of tree commence by an eye or bud; that this eye is either a wood-bud or a fruit-bud; that a wood-bud may be produced on all parts of the tree, even upon those that are oldest; that it successively becomes a young shoot, a shoot, and a wood or fruit-branch; that the flower-bud is not produced on any other than wood of one year old; and that to have fruit for any length of time, we must know how to produce a succession of this young wood.

Lastly, it is doubtless understood that each wing of a Peach tree trained against a wall is the product of an eye of the original tree that has undergone all the changes spoken of.

(*To be continued.*)

CULTURE OF ASPARAGUS.

Asparagus is one of the most generally esteemed esculents that our gardens produce, and in our climate very easily brought to the highest state of perfection. But how seldom do we see even a tolerably grown article in the markets or on the tables of public or private houses. Nine-tenths of it is about as large as a pen-holder, and as stringy as a hemp rope, instead of being "as thick as the thumb, and brittle as glass." A late number of the *London Gardeners' Chronicle* touches upon this matter, and brings forward clearly and forcibly the main points on which successful management depends. *First*, abundance of manure applied at the proper time. *Second*, preservation of the stems and leaves during the whole season of growth, and, if possible, the prevention of seeding. *Third*, not to cut until the roots have become large and strong, and then to cut only every other year. *Fourth*, to keep the roots near the surface in order to give them full benefit of atmospheric heat, that the growth may be strong and rapid, and therefore green and succulent. Nobody now-a-days thinks of eating the stringy, blanched portion of Asparagus shoots. The article referred to is as follows:

"That information upon this point is needed the poor samples so continually produced at tables where excellence is to be looked for sufficiently indicates. But we are far from thinking that M. Courtois has exhausted the subject; on the contrary, he misses that which, to private persons at least, is most important—the mode of obtaining the largest and most succulent, and *therefore* the best Asparagus for table.

"Many years ago the manner in which the great Biscayan Asparagus is obtained was pointed out by a most intelligent correspondent in these columns. Some of the details of the Spanish process were, however, unsuitable to English circumstances, and we believe it had never been imitated in this country. Another method by which enormous succulent shoots were obtained in Suffolk was briefly published in the Journal of the Horticultural Society. That plan is described in the following words: 'I set out my bed as follows: 60 feet long; 5 feet wide; 4 feet deep. The earth was all taken out and laid on one side the bed. I then placed at the bottom, 2 feet deep salt ooze, from the banks of the Alde; 1½ foot deep of the river weed (a long grass). Two feet of the best vegetable mold

was then placed on the top, and the young plants set out at 18 inches distance all over the bed.' They were then buried in a few inches of rich soil.

"Leaving the reader to compare this mode of forming a bed with the French and common English methods, we would invite attention to the following considerations, which greatly concern gardeners, now that the season of forming Asparagus beds is at hand. The grower of this vegetable ought to recollect that the two points of excellence in it are first *size*, and sound *succulence*. It should be thick as the thumb and brittle as glass. To secure this result two things are indispensable; it must be produced by very vigorous plants, and it must grow very fast. These two cardinal points must be considered separately.

"Its vigor will depend upon the soil in which it grows, the quantity of manure it receives, and its general treatment. The long stout succulent fangs, or roots, of an Asparagus are so tender that they will not form freely in soil which offers much resistance. Nature places it in its wild state among sea sand, the most yielding of all earthly substances, never becoming dry, never remaining loaded with stagnant water, but at every tide receiving a supply of the saline particles that constitute an essential part of the food of the plant. Under such circumstances the roots meet with no obstruction to their full development. There is, however, no apparent necessity for sand; what is really wanted is some soft material, moistened with salt water, and so placed that while it is always wet, it will never become water-logged. How unlike this is to the hard, coarse earth, so often used for this plant we need not say.

But the natural Asparagus is never large; on the contrary, it is more like what is technically called 'sprue.' The cause of that is, we presume, to be sought in the want on the sea shore of the powerful manure on which it greedily feeds, when it can obtain it. The wild Asparagus has all that it requires for mere health; but it is ill fed; it differs from the fine garden plant just as lean kine differ from fat bullocks. Feeding makes all, or great part of the difference. Experience shows that no manure is too strong for this plant; its great spongy roots can take up any quantity with advantage, if applied at the right season. That season is after it has begun to move in the spring; applied at any other time the fat oozy slime which it loves is absorbed without being assimilated, and soon produces a fatal rot in the roots. Beside this, the plant must be cherished during summer while not under the knife, for it is only thus that its vital powers can be much increased. No exuberance of growth in the Asparagus stems can be regarded as excessive; nothing should be done to check it; every branch that a plant is able to form should be anxiously preserved, and if any means can be used to prevent the formation of berries, which we must remember is a process of exhaustion, these means should be adopted, provided always the little thread-like green leaves are in no way injured. Small as they are they conduce to the strength of the Asparagus, as much as its broad leaves to a forest tree. Such precautions having been taken, great buds, as large as acorns, will appear in clusters from the crown of the roots, and out of them will rise gigantic shoots in the succeeding year. All these precautions will, however, fail if the Asparagus is called upon to bear a crop before it is old enough. Early bearing ruins plants as much as animals, and inevitably brings on premature debility. The older it is before the cutting begins, the stronger, other circumstances being equal, will it be found. The exhaustion attending the production of a crop one year should also be made good by resting the Asparagus during the next year. In other words, giant Asparagus can not be looked for if the bed is cut oftener than every other year.

"The Asparagus being brought to the requisite state of vigor, the next question is how to secure the necessary succulence, which it never has beyond two or three inches in an

English market, and not often anywhere else. That succulence will depend upon temperature as much as other causes. The warmer the Asparagus bed is kept while the sprouts are rising, the more brittle they will be, provided the temperature of the soil does not rise above 75 degrees at the most. Now under ordinary circumstances, everything is done to keep it cold; buried twelve or thirteen inches below the surface, the influence of the sun is slowly felt, and very imperfectly into the bargain. It is only when the roots are lightly covered by some rapidly conducting material that the sun can exercise his proper influence, unassisted by artificial contrivances. Hence, one of the greatest faults that the Asparagus grower can commit is to bury his plants deep. Only observe Mr. KENDALL's practice; his plants are just covered with soil resting upon a deep bed of the most nutritious matter. The earliest rays of the sun are felt in such a case, and as soon as the dormant energy of the plant is roused, it continues to be exercised without a day's interruption. It is true that the Asparagus thus obtained is green; and so it should be. Green-grocers and cook-maids are of a different mind, and we believe are the only authority to the contrary. Their opinions may, we think, be fairly examined by the evidence of the senses of those who have eaten this vegetable; and to that ordeal we have great satisfaction in committing them."

SHELTERING LANDS.

BY WILLIAM BACON, RICHMOND, MASS.

EVERY observer has noticed the difference between the starting of vegetation in spring in different localities, and those often but a few feet separated. In the mountain glen, shut out from cold winds, and almost from sunshine, there is usually a difference of some days in the starting of the leaf and opening of the blossom compared with the occurrence of the same event on the hill top near by, where rude winds sweep unresisted. On the south and east sides of the grove the same effect is always visible; verdure and freshness are seen there, when in the open field nothing greets the eye but the desolation that winter has wrought. Even the few trees that are sometimes planted around dwellings are found to modify the climate—softening the asperities of winter, and yielding cool and healthful breezes in summer.

These facts, so common and so strongly marked, must have been noticed by every one, and yet how few of the many who deplore the severity of climate—lamenting the ravages of frost both in late spring and early autumn—have ever taken the hint from Nature to protect fields and gardens by belts of trees, not only from these frosts, but the cold breezes of winter and the rough winds of early spring? We prophecy a reform in this matter—not immediate and universal, to be sure, for such an event, even in these days of rapid progress, would be miraculous. But the thing is beginning to be done. Its benefits are seen and appreciated, and, if we mistake not, before the commencement of the next century such protections will be as common as gardens, if not as numerous as cultivated fields.

The objections which will be brought against this improvement are easily anticipated. *First*, the everlasting objection to setting out trees of all kinds, that "it will

take the belt so long to grow large enough to be beneficial" comes up. The world has always been full of such prudent calculation in all rural matters. They have been, and are now, an overwhelming majority, but a majority that can not rule; and while they have, with the thing and its utility before them, been resting quietly in such a supposition, the humble minority have been engaged in the work, and are now enjoying the benefit of their labors. Another objection we have heard stated was, that "these belts will occupy too much land." They will take land, to be sure; and we mistake very much if they do not *make* land, too, by increasing the fertility of what remains by ameliorating the temperature, so that it actually produces much more in actual value than the whole did under the unprotected dispensation. New powers of fertility will be given to the soil, and new products will be introduced with greater prospect of success, and twenty articles of comfort and luxury which, if grown at all, were of indifferent quality, will be raised in perfection.

But the land occupied by the belt is not lost. In all the older sections of our country, and on the prairies, every tree that grows in the field or forest, no matter where, adds to the value of the estate. It is so now. It will be more strongly felt in the future, unless some new project shall be introduced to cut off the necessity of fuel and timber; an event not likely to take place. So these belts, if they become too unwieldly in size, or if through the amelioration of climate from natural causes (which we can not expect) so that they are cumbersome or useless, will pay a good per cent. on the value of land when taken off. They need not, under any circumstances, demand a width of more than ten or twelve feet; all beyond this may be appropriated to ordinary purposes of cultivation. We give this as the extreme quantity — all they will require when fully grown, so as to soften the atmosphere for many rods. In the early stages of growth — say for the first ten years — they will require no more ground than a heavy wall, and less than a Virginia rail fence. Belts of deciduous trees would be highly effective, but evergreens are best adapted to the purpose, from the compactness of their branches and leaves, which, when trained by shortening-in the branches, will render them almost impervious to winds. The Pine and the Hemlock are probably best adapted to the purpose from their extreme hardiness and compactness of form. The Cedar and Fir, in proper localities, will probably prove equally beneficial for the object.

The imaginary difficulty of successfully transplanting evergreens will doubtless be an obstacle in the minds of many to their adoption for this purpose. But it need not be. They may be as safely transplanted as the Poplar or Willow, if proper care is used in the operation. The ground where they are to be set should be prepared previous to their being taken up, as this will shorten the time of the roots being out of the earth and exposed to the atmosphere, which, without proper precaution, is injurious to any tree. The ground should be prepared by opening a trench amply wide enough to receive all the roots that can be obtained, and allow them to lie extended in their natural position, and so deep that the mellow earth may be thrown back for them to rest upon. They may then be set by a line and loose earth thrown in until the roots are so far covered as to allow ample space for the first year's growth;

after which the sod, if it was sod land, may be thrown in, grass down, and be useful in keeping them in their places, and by decay furnishing food for future growth.

In taking up the plants more than ordinary care is necessary, as they are more sensitive of wounds and bruses than most deciduous trees. It is often the case that they may be found in low, swampy lands, growing over old moss-covered logs, when the roots must necessarily lie near the surface, until they extend to the soil beneath. Such plants, with nearly all their rootlets and the soil connected with them, can easily be obtained, and a failure in them is wholly unnecessary. They would soon dwarf and die if allowed to remain on their log home, but transplanted they become vigorous, thrifty trees. Next to this they can best be obtained from old fields on the margin of swamps, where the soil is often thin from repeated washings, and the subsoil too stiff to allow the roots to penetrate it. In a wet time, like spring or autumn, they can be easily taken out with all, or nearly all, the soil adhering, and in a situation to have it removed with these to their new locality. Such trees are usually best for screens; for, from being continually exposed to the atmosphere, they have acquired a hardiness beyond that attained by sheltered ones. Their branches are firmer and thicker set, which renders them better adapted to the object. If the branches are inclined to grow long and occupy too much land, they may be shortened-in and trained in a conical form, when they will present a beautiful wall of verdure at all seasons, so forming an ornament to the grounds, as well as a protection from winds and the fierce driving storms.

NOTES ON FRUITS IN NORTHERN INDIANA.

BY G. C. M., MISHAWAKA, IND.

I PROPOSE to furnish you with a few notes in regard to some varieties of apples and pears which have recently fruited with us.

APPLES.—I believe it is conceded by all who have attended the fairs of St. Joseph, Laporte, and Elkhart counties, that we can produce as fine fruit, in this line, as can be found anywhere. The only drawback we have had the present season has been the apple worm, which has made sad work—in some instances destroying almost all the fruit in entire orchards.

Northern Spy.—Although I procured grafts of this variety some six years ago, yet they fruited this season for the first. I judge from this that it is tardy in coming into bearing. The fruit, however, is fine. I think it will fully maintain its high reputation here.

Wagner.—This also fruited for the first time this season, though on much younger trees, the grafts being but of two years growth. Fruit above medium in size—beautiful in appearance. I think it will prove one of our most valuable varieties.

Dominie.—I have had this in fruit for two or three years, and consider it worthy of very extensive cultivation. It is one of the greatest bearers I have in my orchard

—answering, in this respect, fully to DOWNING's description of it. In addition to this, the fruit is uniformly fair, above medium in size, and of excellent quality. I doubt not, as this variety becomes better known, there will be a large demand for it for cultivation for market.

Baldwin.—From the unfavorable reports made of this variety by the Ohio fruit growers, I was apprehensive it would not succeed well with us; but I am happy to say that so far these apprehensions have not been realized. My trees have borne for three years, and the fruit, in appearance and quality, is fully equal to the same variety in Western New York—not the slightest indication of the "bitter rot." Should it hold out as it has begun, I shall not regret that I have planted more largely of it than of any other variety.

Rhode Island Greening.—This world-renowned apple is very popular here. It is said not to succeed well on the rich prairies of Illinois, but here, in the St. Joseph valley, it fully maintains its reputation as one of our best winter apples.

PEARS.—I doubt whether there is any part of the United States better adapted to the cultivation of the pear than this. I think we might safely challenge the world to show larger and better specimens of *Bartletts, White Doyennes, Seckels,* &c., than have been produced in the St. Joseph valley; and it is a very encouraging fact that, although there are numerous trees throughout this region that have been in bearing for many years, yet that scourge of the Pear tree, the fire blight, has never made its appearance in our midst.

Bartlett.—This variety has been in fruit with us for several years. It bears early and well. Fruit uniformly large and fair; quality very good. It is the only early pear worthy of extensive cultivation, in my opinion. As it comes into bearing so early, as a standard, there is not much object in working it upon the quince; but from a few specimens I saw on such trees the last season, I should judge that it is improved both in size and quality.

Buffum.—This variety does uniformly well, and is becoming very popular. The tree is a vigorous, upright grower, and bears abundantly. The fruit, though but medium in size, is fair, and in quality ranks as "very good," if not as "best." I have heard a number of good judges of fruit pronounce it equal in quality to the *White Doyenne.* When the thriftiness and productivness of the tree are considered, I think it will prove one of our most valuable varieties.

White Doyenne.—This noble pear, whatever may be its failings elsewhere, still retains all its ancient excellence with us. No cracking of the fruit or other symptoms of decline has been seen in it. Such specimens as were shown at our county fair would rejoice the eye and gladden the heart of every lover of good fruit. This pear commands a higher price in Chicago (which, by the way, is becoming the fruit market for the Northwest) than any other variety. Several persons who are cultivating it largely have realised from $12 to $15 a barrel this season.

Seckel.—The *Seckel* maintains its position here as the standard of excellence in flavor. It proves to be a very good bearer, and the fruit is larger than I supposed from the description of the books; instead of "small," it approaches "medium" in size.

Louise Bonne de Jersey.—This has fruited on my ground for the first time this year, and I must confess that I am somewhat disappointed with it. Although it is a good bearer, and the fruit fine in appearance, yet there is an *astringency* about its flavor which would destroy its reputation in the estimation of all who know what a good pear is. I hope, however, this is but an accidental circumstance, arising from some peculiarity in the season, and that it "will be better next time."

Belle of Brussels.—Fruit large and handsome, but worthless.

Winter Nelis.—This is an early and good bearer, and the fruit excellent in quality, but it proves a fall pear with us. Ripens from the last of October to December.

I might enlarge these notes by speaking of a number of new varieties which have produced single specimens of fruits, but as these are hardly sufficient to lead to a correct estimate of the character of the fruit, I will defer it till after another year's experience.

[We thank our correspondent for his notes, and hope he will continue them from time to time, as he gains information and experience. We are glad to learn that our New York favorites, the *Northern Spy*, *Wagner*, *Baldwin*, and *Greening* apples, and *Bartlett*, *Seckel*, and *White Doyenne* pears, sustain their excellence as they go westward. We feel confident that the *Northern Spy* will do well in the west and south. The *Louise Bonne de Jersey* will be all right. It never is a *sweet* pear, like a *Flemish Beauty* or a *Belle Lucrative*, but vinous, like *Brown Beurre;* and all vinous pears are liable, if mismanaged in any way, to be more or less astringent.—Ed.]

GRAPES AND GRAPE CULTURE.

BY A. MESSER, GENEVA, N. Y.

It may perhaps be gratifying to some of your readers engaged in grape culture, to have a few words more at the close of the season. The vines in my house did well, and the fruit was in good condition, until about the first of September. The *Royal Muscadine* were perfectly ripe, and as well flavored as the same variety can be expected to be, under any circumstances. Other varieties were not quite matured. But the rains had fallen quite copiously for several weeks, at short intervals. The border outside was becoming thoroughly soaked; and a few cold and cloudy days sadly arrested the ripening process. If, from this time, two-thirds of the falling rain could have been carried off without penetrating the earth, the fruit would have continued to improve. But for the want of this precaution, unnecessary in common seasons, it was deficient in color and flavor. I think I have never witnessed such an excess of moisture at this season of the year. From the 15th of September to the 1st of November, the soil has not been sufficiently dry to allow us comfortably to dress out our strawberry beds.

My grapery is designed to be a cold house; but, on account of the proximity of

forest trees, and other obstructions, it does not obtain a fair proportion of light and heat from the sun. To compensate for this deficiency, I made some use of artificial heat in April and May. As a general thing, in good exposures, I hold to the "cold grapery," in the best sense of the term. If we leave it all to Nature, after furnishing a good, close house, made after approved models, we are in the way to have the best of fruit, in common seasons. But *my* grape season ended about the middle of September; and if there had been no forcing in the spring, the *Hamburghs*, *Muscats*, and *Frontignans* would have been worthless. I observed that of the *Purple Frontignan*, in the vinery of Mr. H. S., in this village, many clusters decayed prematurely, by excess of wet, and cool, cloudy weather; and he enjoys a full exposure to the sun. Let those who are constructing, or are about to construct, a grape border for growing foreign varieties under glass, observe two rules: Let them be sure to provide a good and sufficient drainage, in the first place; and secondly, use a light vegetable mold for a considerable part of the compost.

It has been a question with some who are supposed to be learned on the subject, whether the *Cannon Hall* is better than, or essentially different from, the *White Muscat of Alexandria*, of which it claims to be a seedling. Of the former, what can be known from one bunch, grown on a young vine, is, or rather *has been*, before us. The berries were about the same size as the largest *Muscat* — a little more oblong — a little more yellow in color — and the flavor equal. Our fruit committee at the county fair can speak on that subject, for they saw and tasted; but their report contains nothing to indicate that a single foreign grape grown under glass was exhibited on the occasion — and yet there were there collections of several varieties, from three different graperies, which for beauty, size, and maturity, would compare favorably with any other similar show in this part of the country. The *Cannon Hall* also with me ripened about a week in advance of the parent, the *Muscat of Alexandria*.

Among other marks to show that this elegant branch of horticulture is moving onward, I am happy to say that my friend and neighbor, J. S. KING, has become so much infected with the grape *mania* that he has just erected a beautiful vinery, which makes the fourth in this village. It is a span roof, which is also arched, and is built after the model of the Clinton Point vinery, an engraving of which is to be found in the *Horticulturist*, Vol. IV. The dimensions are: 30 feet long, 18 feet wide, and 14 feet high — which, with border, cost about four hundred dollars. A few days ago a gentleman from Syracuse, with a carpenter, came and examined it, and resolved to build one on the same plan. He was "waked up" to it by rather casually dropping in at PARSONS & Co.'s establishment, at Flushing. I advised him to subscribe for the *Horticulturist* at once, which (strangely to say) he had not done.

By the way, myself and others are highly gratified with the "Facts in Native Grape Culture," as given by your correspondent in Naples. "The vine is a gross feeder." Let us have all the facts.

NEW PLANS FOR GREEN-HOUSES.

BY ROBERT MESTON, ASHWOOD, TENN.

In giving my plans for an improvement in green-houses, I will first remark that the object is to improve the interior of such buildings, by doing away, in some instances, with the long and heavy-looking stages, and introducing something more light and elegant in appearance. You will see by the diagrams that the object is to group all the plants on circular and revolving stages, being so constructed that all the pots are hid from view. The object in this revolving stage is to give to all the plants an equal portion of sun and light. In fact, the plants on these stages will "know no East, no West, no North, no South;" being under the control of the operator, they can in an instant be changed at pleasure.

Fig. 1 is a span-roof house, that in some cases might be beneficial to commercial gardeners, as it may be placed east and west as well as north and south. This house is sixteen by forty feet in the clear, side walls three feet, height ten feet. B, B, front stages, two feet wide. J, J, walk, three feet wide, all round the house. D, showing the position of a circular stage, six feet in diameter at the base. This house will hold seven of these stages, by setting them so as not to touch. There will be little or no room lost in this system of staging plants, and it will have the advantage of bringing any portion of the plants to the sun when required. When the houses are filled with mixed plants, I think the grouping system would be of advantage, as they do not all require the same treatment the season round. And if ever such stages should be required they can be made very plain: the revolving part of the stage can be placed upon a wooden frame, running round in a cast-iron groove; the shelves can be cast whole, with plain open-work, say three bores to a shelf, leaving the pots in view, as in the present case.

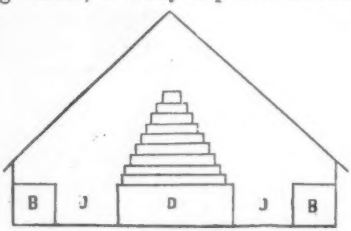


Fig. 1.

I will now turn to what I call a model green-house (fig. 2). It is a house twenty-seven by forty feet, supposed to be a span-roof house—but I shall say nothing about the building, my remarks being confined to the fitting up of the interior. *a*, *a*, *a*, *a*, to receive the cast-iron cylinder, 2; this is of ornamental cast-iron, the pattern to be flowers and foliage—height, two feet six inches. 3, a moulding; over that, eight inches of ornamental work, of another style, to hide the first row of pots on the stage. About sixteen inches from the top of the cylinder, on the inside, is a strong flange, two or three inches wide, intended to carry the stage. 4, cross section, that supports the bearers. 5, rollers. 6, a straight piece of square iron, to receive the top, 7; the bearers passing in at 8, and secured with bolts at 9. The shelving to be cast a little hollowing, rising in the front about eight inches, to correspond with the ornamental work on the top of the cylinder, which rises in the back two inches. An inch or two

of fine sand, put on the shelves for the double purpose of taking up the drip from the pots, and absorbing it again in the house. *g*, cast-iron pipe, to act as the chimney, the upper part to correspond in workmanship with the stages. *h*, stage, eight feet in diameter; this can be made to revolve by attaching the bearers to a strong bolt round the chimney. *i*, cistern; the water to be conveyed under ground; the top of the cistern to be under the floor of the house. *f*, pump, also to be hid, by an ornamental shaft, not less than four feet high without the vase, to be cast round, square, or octagon (I suppose it ought to be round, to be in keeping with the stages).

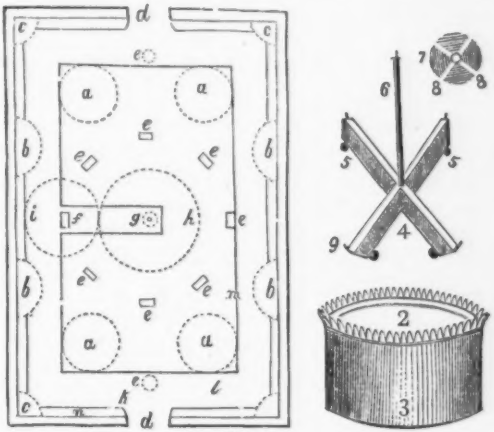
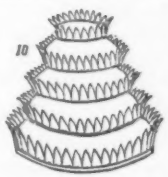


Fig. 2.

The spout of the pump screws on, and the handle is made to take off at pleasure. When the pump is not in use it is shut up in this column, by means of two movable panels. *e*, monumental shafts, or columns, varying in height, similar to the one above. *b*, stages, to correspond with the above, but of course stationary. *c*, corners, to group large plants or stages, as may be required. *n*, border, one foot wide, running all round the house, about two feet six inches deep, to be well drained and filled with suitable compost, for creepers to run up the rafters. *k*, four-inch brick wall; holes to be left in the first course of bricks, as an escape for the drainage from the border. *m*, a wall like *k*, without the openings. *l*, this place receives the heating apparatus, being two feet six inches wide in the clear. *d*, *d*, door, four feet wide. The whole of the floor to be covered with a neat cast-iron grating, to be cast in panels, to be taken up at pleasure. An ornamental flange runs all round the house, separating the border from the floor; the four stages, 10, to be finished with vases. Brackets may spring from the pilasters, or between the rafters, bearing an acorn cup or Magnolia flower, to receive a pot with some pendulous plant. All the vases for plants of that nature swinging from the roof in convenient places, ornamental baskets of iron filled with the same plants, a few neat iron chairs placed on the floor in convenient places, to be bronzed. There is in this house a little over six hundred feet of staging, running measure. This house would be well adapted for a first class place, where a supply of plants in season could be supplied. As this is the iron age as well as the progressive, suppose both were applied to the beautifying of the buildings dedicated to Flora.



Foreign Notices.

SCRAPS OF HISTORY OF POPULAR ENGLISH FRUIT.—The increase and skillful application in the adornment of our parks, gardens, and dwelling-places with beautiful flowers and plants has ever been regarded as one of the most commendable and meritorious marks of persons of taste. To show how true and proper these views are, it would only be necessary to refer to the magnificent timber trees and ornamental shrubs and flowers which enrich and beautify so many of the country residences of persons of wealth in all parts of Great Britain. This is in a large measure both good and profitable; but it is but a section—a part of a great work; and although the effects are felt and enjoyed by every inhabitant of these islands, the actual benefit and ownership is enjoyed by the opulent only. The encourager, cultivator, and patron of hardy fruit-bearing trees, on the contrary, confers a universal benefaction alike on the rich and the poor. Every person who shares at all in the enjoyments of floriculture envies, more or less, the enjoyment and satisfaction of those who originate some garden cross-bred plant possessing qualities which speedily render it an object of popular attraction. A new Dahlia, a new Fuchsia, a new Pelargonium, or any similar flower when raised by some fortunate amateur, carries with it everywhere the name of the raiser; and this is always deemed a mark of honorable distinction which every real florist is very properly ambitious to obtain. So also is it with other kinds of horticultural productions; and all this is very proper, and we need not say agreeable: and why should a florist be indifferent to the feeling and desire so common in all other classes—that is, to perpetuate his name by associations with some object connected with those pursuits in which he takes especial delight? We say all this is perfectly right.

If in these fugitive and short-lived objects there be honor and distinction sufficient to stimulate the efforts and zeal of the florist, what must be the honor justly felt by the originators of some new kind of hardy fruit—fruit fitted alike for the use of rich and poor—such, for example, as the *Keswick Codlin*, the *Hawthorndean*, the *Ribston Pippin* apples, the *Damson* and *Orleans* plums, the *Jargonelle* pear, and other popular fruits, some one or other of which is certain to be found in every cottager's garden in Great Britain? It is a singular fact connected with the history of fruit trees, which has been strenuously contended for by some and denied by others, that fruit trees, after a given number of years, deteriorate and become useless. This is asserted to be the case with the *Golden Pippin*, which, it is affirmed, is not now what it was, in point either of size, flavor, or productiveness, fifty years ago. We are not quite sure that we are prepared to deny this theory, but several other kinds of apples have more recently been introduced, and some of these of high merit; and it is not very impossible that the comparative merits of this variety have suffered in public estimation from this cause, rather than from any actual deterioration in the quality of the fruit itself, and so also with others similarly regarded. In the north of England the *Ribston Pippin* has long been the favorite apple, as the *Blenheim Orange* has been in the west. It is a little singular that within the last few days the following remarks respecting the original tree of the *Blenheim Orange* apple have come into our hands:

"The last remnant of the stem of the original tree of the *Blenheim Orange* which first produced this celebrated apple is no more—the sapless and molding relic itself exists no longer: that which the wood-louse and the worm were gradually consuming, the war of the elements and the hand of man have hastened to a swifter decay. The rains and wind of last autumn leveled the rotten and hollow shell, and the broken fragments have been gathered up and committed to the fire. 'Thrown down and cast into the oven,' this time-honored relic has fulfilled the stern decree of Nature against all vegetable life. The only sound piece of wood remaining

was preserved by a horticultural enthusiast to make a snuff box, to serve as a memorial of the past, and to recall visions of him 'who first planted the tree.' In the autumn of 1851 we wrote as follows: 'In a somewhat dilapidated corner of Old Woodstock stands all that remains of the original stump of the *Blenheim Orange;* it is entirely dead, and rapidly falling to decay, and time will soon claim the hollow rotten remnant.' We are told how the white-haired gardener, KEMPSTER, first raised from seed this beautiful and justly celebrated apple—that he lived in his little cottage garden, in Old Woodstock, a plain, practical, laboring man. KEMPSTER is long gathered to his fathers, and the favorite tree to which he gave his name is now no more seen; nothing remains to mark the spot except a young tree immediately derived from the patriarchal trunk itself. Though the parent stem has forever vanished, a numerous and flourishing offspring thrive in the neighboring crofts of Woodstock, Kidlington, and Bladon, and the hamlets and villages of Oxfordshire; and thence are now generally dispersed throughout the length and breadth of this island, and have reached even to our Australian and American colonies. Some have thought this apple was 'raised' in Blenheim Park by the Duke of Marlborough's gardener; but the towers of Blenheim in this case have no claim to our fruit. It was named in honor of one of the Dukes of Marlborough."—*Oxford Journal.*

We find from other records that this tree was raised, or first brought into notice, in the year 1781. This would seem but a short period for the duration of life of an Apple tree; but it may not be wholly correct; or, if it be correct, the tree may have been exposed to injurious or unfavorable influences, and thereby hastened its decay. Some writers have professed—as HALLER has done in Herefordshire—that Apple trees have been ascertained to reach the goodly age of one thousand years; but the late Mr. KNIGHT asserts that the apple in course of years deteriorates, and that its natural age is confined to two hundred years. No kind of fruit can be brought to the same perfection with the same certainty, and with the same small amount of trouble, in this country, as can the apple.

With regard to the introduction of the apple, writers are generally agreed that we are indebted to the efforts of Lord Scudamore, who was English Ambassador at the Court of France, during the reign of CHARLES I., about the year 1629; and we are informed by EVELYN that about fifty years later, HARRIS, fruiterer to HENRY VIII., first planted Apple trees about the environs of towns and villages in Kent, "to the universal benefit and improvement of the country." At the present moment, no one seems to concern himself about our domestic fruits. The late Mr. KNIGHT has gone, and no one has taken his place. The Horticultural Society cares for none of these things; and at present no one is listened to, who talks of any thing but Orchids and Gilliflowers.—*London Gardeners' and Farmers' Journal.*

LEAVES FROM MY CHINESE NOTE BOOK.—Under this title I propose to send you, from time to time, descriptions of Chinese gardens, plants, and other objects of natural history which I consider of sufficient interest to occupy a place in your columns. As many of your readers have, no doubt, heard of "Howqua's Mixture," I shall begin by attempting to describe HOWQUA'S garden.

This garden is situated near the well known Fa-tee nurseries, a few miles above the city of Canton, and is a place of favorite resort both for Chinese and foreigners who reside in the neighborhood, or who visit this part of the Celestial Empire. Having occasion to be in Canton a few weeks ago, I determined on paying it a visit in company with Mr. M'DONALD, who is well known in this part of the world as an excellent Chinese scholar, and to whom I am indebted for some translations of Chinese notices, which appeared very amusing to us at the time, and which, I dare say, will amuse your readers.

Having reached the door of the garden we presented the card with which we were provided, and were immediately admitted. The view from the entrance is rather pleasing, and particularly striking to a stranger who sees it for the first time. Looking "right ahead," as sailors say, there is a long and narrow paved walk lined on each side with plants in pots. This view is broken, and apparently lengthened by means of an octagon arch which is thrown across, and beyond that a kind of alcove covers the pathway. Running parallel with the walk, and on each side behind

the plants, are low walls of ornamental brickwork, latticed so that the ponds or small lakes, which are on each side, can be seen. Altogether, the octagon arch, the alcove, the pretty ornamental flower pots, and the water on each side, has a striking effect, and is thoroughly Chinese.

The plants consist of good specimens of Southern Chinese things, all well known in England, such, for example, as Cymbidium sinense, Olea fragrans, Oranges, Roses, Camellias, Magnolias, &c., and, of course, a multitude of dwarf trees, without which no Chinese garden would be considered complete. In the alcove alluded to there are some nice stone seats, which look cool in a climate like that of Southern China. The floor of this building is raised a few feet above the ground-level, so that the visitor gets a good view of the water and other objects of interest in the garden. That this is a favorite lounge and smoking place with the Chinese, the following Chinese notice, which we found on one of the pillars, will testify: "*A careful and earnest notice:* This garden earnestly requests that visitors will spit Betle* outside the railing, and knock the ashes of pipes also outside." Several fine fruit trees and others are growing near the walks, and afford shade from the rays of the sun. On one of these we read the following: "Ramblers here *will be excused* plucking the fruit on this tree."

Near the center of the garden stands a substantial summer-house, or hall, named "the Hall of Fragrant Plants." The same notice to smokers and chewers of Betle-nut is also put up here; and there is another and longer one which I must not forget to quote. It is this: "In this garden the plants are intended to delight the eyes of all visitors; a great deal has been expended in planting and in keeping in order, and the garden is now beginning to yield some return. Those who come here to saunter about are earnestly prayed not to pluck the fruit or flowers, in order that the beauty of the place may be preserved." And then follows a piece of true Chinese politeness: "We beg persons who understand this notice to excuse it!" Passing through the Hall of Fragrant Plants we approached, between two rows of Olea fragrans, a fine ornamental suite of rooms tastefully furnished and decorated, in which visitors are received and entertained. An inscription informs us that this is called "the Fragrant Hall of the Woo-che tree." Leaving this place by a narrow door we observed the following notice: "Saunterers here will be excused entering." This apparently leads to the private apartments of the family. In this side of the garden there is some fine artificial rockwork, which the Chinese know well how to construct, and various summer-houses tastefully decorated, one of which is called the "Library of Verdant Purity." Between this part of the garden and the straight walk already noticed, there is a small pond or lake for fish and Water Lilies. This is crossed by a zigzag wooden bridge of many arches, which looked rather dilapidated. A very necessary notice was put up here, informing "saunterers to stop their steps in case of accident."

On the outskirts of the garden we observed the potting sheds, a nursery for rearing young plants and seeds, and the kitchen garden. Here a natural curiosity was pointed out by one of the Chinese, which, at first sight, appeared singularly curious. Three trees were growing in a row, and at about twenty or thirty feet from the ground the two outer ones had sent out shoots, and fairly united themselves with the center one. When I mention that the outer trees are the Chinese Banyan (*Ficas nitida*), it will readily be seen how the appearance they presented was produced. The long roots sent down by this species had lovingly embraced the center tree, and appeared at first sight to have really grafted themselves upon it.

I am afraid I have given a very imperfect description of this curious garden. Those who know what a Chinese garden is will understand me well enough, but it is really difficult to give a stranger an idea of the Chinese style which I have been endeavoring to describe. In order to understand the Chinese style of gardening, it is necessary to dispel from the mind all ideas of fine lawns, broad walks, and extensive views; and to picture in their stead everything on a small scale—that is, narrow paved walks, dwarf walls in all directions, with latticework or ornamental openings in them, in order to give views of the scenery beyond, halls, summer-houses, and alcoves, ponds or small lakes with zigzag walks over them—in short, an endeavor to make small things appear large, and large things small, and everything Chinese. There are some of these ornaments, however, which I think might be imitated with advantage in our own gardens. Some of the

*The natives in the south of China, like the Malays, are very fond of chewing the fruit of the Areca, commonly called Betle-nut.

doorways and openings in walls seemed extremely pretty. In particular I may notice a wall about ten feet high, having a number of open compartments filled with porcelain rods made to imitate the stems of the Bamboo. I shall now close this notice with the modest lines of the Chinese poet, which we found written in the "Library of Verdant Purity," and which seemed to be an effort to describe the nature of the garden:

'Some few stems of Bamboo plants,
A cottage growing round;
A few flowers here—some old trees there,
And a mow of garden ground."

—*R. F., in London Gardeners' Chronicle.*

Taking up and Storing Dahlias.—In a treatise on this flower, recently published by Groombridge, the cutting down is recommended "not to be performed until the first frosts have completely checked vegetation. For choice, good varieties, it is an excellent plan," says the authority, "to place a small hillock of dry ashes round the stem of each plant. This protects the embryo buds both from any sudden severe frosts, and also carries off to a distance the heavy autumnal rains. In wet grounds especially, this is a good and useful application, though in high dry land it may not be absolutely necessary. Choose some dry morning, when there is a probability of a dry following day, and cut down the plants within one foot of the ground. The day following take up all the roots so cut down, and turn them upward to allow the watery sap to drain from the stems. Bring them in under cover, and see that the numbers or names are all securely tied to the stems with copper wire. Mat or twine is not good for this purpose, because it will soon rot, and the name may easily be displaced or lost—a matter of consequence to such as wish to keep their plants true to name. The roots should all be taken up on the same or the following day, in order to become all dry together, so that they may be put away for the winter at once. Let all the soil be carefully picked out from among the tubers without wounding them. As soon as they are quite dry, and before they begin to shrivel, fix upon a place to store them away. A dry cellar is best, because there is, in such a place, just sufficient moisture to keep the tubers fresh without shriveling, and the buds alive. Pack them with their stems downward, and cover them up with dry clean straw, several inches thick, a layer of roots and a layer of straw between and under each layer of roots. In these winter quarters they may remain till the season for starting them into growth returns. They should be looked over about once a month, and all decaying roots and rotting stems removed, and fresh dry straw laid upon them to absorb any moisture; this is the best method of keeping Dahlia ground-roots. Pot-roots should have their tops cut off, and the pots laid on their side in a place where the frost can not have access to them. If the amateur has a green-house, these pot-roots can be conveniently stored away under the stages, laid on one side: no water that may run through the stage from the plants will injure them. Pot-roots keep better than ground-roots, and therefore it is desirable to have a few of each variety struck later for this purpose. If the amateur has no cellar for his ground-roots, nor a green-house for his pot-roots, he may store the former away in boxes, in a dry chamber, or in any out-building, provided the frost can be kept from them by some kind of covering, such as old carpets or garden mats. In such places they will require more frequent looking over, to remove all decaying roots and stems.—*London Gardeners' Chronicle.*

Culture of the Pelargonium.—I strike my cuttings, which are obtained as soon as the wood is thoroughly ripe, under hand-glasses in the open ground, watering them very slightly for a week or two, but exposing them to dews at night. When they are well rooted, they are lifted and potted in turfy loam, two year old cow dung, some peat and silver sand, all well mixed together, and placed on an efficient drainage. The plants are then set in a cold frame, and kept close in the day-time, till they have become established; but they are left open at night. Ultimately the lights are off during both day and night, and, as soon as they will bear it, they are placed on boards, exposed to all weathers, until the long, cold, late autumn nights cause them to be placed in-doors. The main point in their out-door treatment is, never to allow them to get water-logged

or stunted in their growth. They receive a shift in November, using a compost mentioned above without the peat. They are again shifted in February, and each shoot stopped at the fourth joint. Lateral shoots are then produced, and these are tied out horizontally, so as to form the basis of the future specimen. The lateral shoots are also stopped, and by these means plenty of wood is obtained for large plants in the following season. But I have another mode of proceeding, which is, to take strong plants in April or May, pot them in 11-inch pots, place them out of doors, and pick the flowers off them throughout the season. Next year they are fit for exhibition. The plants that are to blossom in May are never stopped after they are cut down in July. The June plants are stopped early in January, and those for July in February. To grow Pelargoniums successfully, I find that much depends on their winter treatment. They should not receive too much water or fire-heat, and the wood should be well ripened before they are allowed to flower, if a fine head of bloom is wanted. My general time for cutting down is between the first week of July and the middle of August, according to the ripeness of the wood. When the plants have fairly broken, the old soil is shaken clean from their roots; the latter are trimmed in a little, and the plants are re-potted and placed in a frame till the have become established, when they are placed out of doors till they are removed to their winter quarters. To come in for exhibition in May or June, they are re-potted in November, and for July in February. When they begin to show flower-buds, liquid manure is occasionally given them. The latter is made by putting into a large tub of soft water half a barrow-load each of cow, sheep, and horse-dung, and a peck of lime, mixed well and using the clear liquid, after two-thirds of clean water has been added to it. During the blooming season plenty of water (not liquid manure, that is only given five or six times just before they come into flower) is required, otherwise the foliage becomes discolored, and the blossoms come small and deformed.—*P., in London Gardeners' Chronicle.*

Culture of the Cineraria.—In order to produce strong blooming plants in small pots early in February of this gem of the winter season, the offsets from stock-plants should be potted into 3-inch pots, or if seedlings they should have been pricked out into the same sized pot about the middle of August; and as seedlings grow quicker than offsets, they will bloom about the same time. The second week in September would be a good time for potting them into 4-inch, and the stronger plants into 5-inch pots, and in a month hence give them their final shift—the former into 5-inch, and the latter into 6-inch pots. The roots will quickly fill the pots, consequently they will require a plentiful supply of water, for if stinted in this respect while growing, they will lose the best of their foliage, on which their fine appearance so much depends, and what would have been flowering shoots will degenerate and become "broody" and be entirely worthless for blooming purposes. The soil I have found them thrive best in consisted of two-thirds good turfy loam, one-third rotten dung thoroughly decomposed, and a little rough sand; pot firmly, and drain the pots well, from first to last a good cool pit in a sunny aspect will both grow and bloom them.—*R. M., in London Gardeners' Chronicle.*

White Ivy-leaved Pelargonium.—When allowed to scramble freely over the surface of the soil, with an invisible peg here and there, this is one of the prettiest bedding plants we have. Its short petioles contrast admirably with the long flower stems, giving the blossoms a charming effect. It is of good habit, and produces abundance of flowers, the latter being so well set off by the stout, glossy, horse-shoe foliage, that I think it can not possibly fail to please those who may be induced to grow it.—*W. Browne, in Gardeners' Chronicle.*

Royal South London Floricultural Society, September 6.—This, the last of the Society's meetings for this year, was well attended, and as an exhibition it was considerably better than the autumn display of 1852, both as regards the quality and quantity of the subjects brought forward. Miscellaneous collections of plants were plentiful and good, but the chief feature was, of course, the Dahlias, some of the specimens of which were exceedingly fine. We noticed Sir Charles Napier, Duke of Wellington, Miss Caroline, Lilac King, Plantagenet, Sir Robert Peel, Sir J. Franklin, Queen of Beauties, Queen of Lilacs, Essex Triumph, Bob, Sir F. Bathurst, and Ama-

zon, in excellent condition. The newer kinds do not appear to be quite so large, perhaps, as Dahlias exhibited a few years ago, but they are are much closer in the petal, deeper, and certainly, to our taste, much more beautiful. The first stands were deservedly much admired. The awards were as follows:

Ameteurs, 24 blooms: 1st, Mr. J. Robinson, Pimlico, with Duke of Wellington, Admiral, Essex Triumph, Thames Bank Hero, Bob, Sir C. Napier, Scarlet King, Imbricata, Malvina, Miss Caroline, Cobden, Nepaulese Prince, Sir R. Whittington, Absalom, Red Gauntlet, Fearless, Sir R. Peel, Scarlet Gem, Mr. Herbert, Sir F. Bathurst, Annie Salter, Triumphant, Shylock, and Morning Star; 2d, Mr. James, Stoke Newington, with the following varieties, in addition to the sorts named in the first stand, viz., General Faucher, El Dorado, Yellow Standard, Mr. Selden, Sir J. Franklin, John Davis, G. Glenny, Mrs. C. Bacon, Edmund Foster, and Louisa Glenny. 12 Blooms: 1st, Mr. Battie, of Erith, with Duchess of Kent, Sir J. Franklin, Sir R. Peel, Duke of Wellington, Barmaid, Sir C. Napier, Queen of Whites, Bob, Elizabeth, Sir F. Bathurst, Fearless, and Sir R. Whittington; 2d, Mr. Holmes, Hackney, with Sir R. Whittington, Mrs. C. Bacon, Sir C. Napier, Duke of Cambridge, Wellington, E. Foster, G. Glenny, Sir F. Bathurst, General Faucher, J. Davis, Cobden, and Mr. Selden. *Fancy varieties*—12 blooms in 8 varieties: 1st, Mr. J. Robinson, with Mrs. Hansard, Phæton, Gloire de Kain, Triumphant, Duchess of Kent, Empereur de Maroc, Maid of Lodi, Floral Beauty, Laura Lavington, and Flora M'Ivor; 2d, Mr. Edwards, of Holloway, with Mrs. Hansard, Gloire de Kain, Rachel, Laura Lavington, Mrs. Willis, Reine de Belges, Saracen, and Miss Compton.

Nurserymen.—24 blooms: 1st, Mr. Turner, of Slough, with Bob, Mr. Selden, Queen of Lilacs, Sir J. Franklin, Malvini, Thames, Bank Hero, Sir C. Napier, Amazon, Duchess of Kent, Miss Caroline, E. Foster, Princess Radziwill, Miss. Spears, Mr. Herbert, Sir R. Peel, Exquisite, General Faucher, Fearless, G. Villiers, Rose of England, Essex Triumph, Sir F. Bathurst, Wellington, and Queen of Whites; 2d, Mr. Keynes, of Salisbury, with Negro, Queen of Whites, Morning Star, Mrs. Selden, Mr. Selden, Beauty of Kent, General Faucher, Miss Caroline, Louisa Glenny, Malvina, Douglas Jerrold, Sir F. Bathurst, Model, Queen of Yellows, Capt. Warner, Admiral, Exquisite, Wellington, Magnificent, Lilac King, and Sir C. Napier. *Fancy Dahlias*, 24 blooms, 18 varieties: 1st, Mr. Turner, with Glorie de Kain, Laura Lavington, Phæton, Claudia, Duchess of Kent, Zebra, Elizabeth, Princess Charlotte, Lady Grenville, Mrs. Willis, Kingfisher, Kossuth, La Pæon Miss Ward, Spectabilis, Princess Helena, Attraction, and Reine de Fleurs; 2d, Mr. Keynes, with Mrs. Hansard, Laura Lavington, Rachel, Mrs. James, Flower of the Day, Empereur de Maroc, Gloire de Kain, Triumphant, Unanimity, Elizabeth, Phæton, Princess Charlotte, Duchess of Kent, Spectabilis, Nancy, Reine de Belges, Lady Grenville, and Wonderful.

In the Seedling tent there was a large number of flowers, the majority of which were inferior in quality to those already out; there were, however, a few first-class blooms. Those selected by the censors for certificates were Fanny Keynes (Keynes), pale yellow, tipped with rosy purple, large, and of fine form; Rachel Rawlings (Keynes), peach of lilac, of a very delicate shade, and exquisite in form; Ringleader (Holmes), a deep ruby rose, of the finest symmetry; Slough Beauty (Bragg), blush white, strongly tipped with crimson, full size, good outline, but center a little confused. There were several good fancy seedlings, which also had certificates. Admiration (Green), white, edged with scarlet, is very attractive; color well distributed, flower full size. Leader (Keynes), a heavy striped flower, full, of good size and shape. Topsy (Keynes), white and purple, an improvement on Elegantissima. Marvel (Pope), orange, striped and mottled with red; novel. King of Yellows was also shown in good condition, as was likewise Wyness's Princess Royal, which is an attractive flower. Fair Rosamond and Incomparable Verbenas, shown by Mr. Bragg, were fine flowers, as were also Forget-me-Not, Angelina, Triumph, Electra, and Nobilissima, from Mr. Smith, of Hornsey. Hollyhocks were confined to a stand of seedlings, from Messrs. Paul, who had beautiful specimens of the following, viz., Conspicua improved, Zenobia, Laura, Flambeau, Pink Model, Sir R. Peel, Lizzie, Prof. Dick, White, Globe, and one or two others. Some good specimens of Japan Lilies came from Messrs. Over, Barnes, and Gaines, and there was a nice collection of China Asters from Messrs. Fraser, of Leabridge Road Nursery.—*London Gardeners' Chronicle.*

Editor's Table.

The present autumn has been the most favorable for out-door work that we remember to have had here in many years. From the first of October until this time (middle of November) there has not, we believe, been one day's interruption—no heavy rains or hard frosts; the ground has been in the best possible condition. Nurserymen have been enabled to finish up their sales in a manner that must be quite satisfactory to themselves and customers, and also to complete their autumn planting, plowing, sowing of seeds, housing of plants, &c., in the best manner. This is a matter of importance, now that nursery operations have become so extensive. Gardeners, too, have had a fine time to store their crops and perform their fall operations on the ground, and of which, we have no doubt, they have availed themselves. We have never known so much autumn planting to be done as there has been this season. We trust that no one who has planted trees will fail to take such precautions in the way of *staking*, *mulching*, and protection, where necessary, as will ensure the safety of their trees during winter. It is much better to take what may seem unnecessary pains than run the risks of losing valuable trees. There is no necessity for loss either in fall or spring planting, if people will but exercise ordinary care and judgment. Mice are very frequently destructive to trees during winter; and to avoid this we urge the clearing away of all long grass, weeds, heaps of rubbish, and every thing affording harbor for vermin in the neighborhood of plantations. This we find a sure remedy.

Plant-Stages in Green-Houses.—Mr. Mestox's communication, which will be found on another page, directs our attention to some points of importance on this subject. It is very well known that plants on ordinary stages, whether the house be a lean-to, span-roofed, or curvilinear, do not enjoy equally the advantages of light and air; and this, beside being a great inconvenience to the gardener, prevents that symmetry of growth so desirable. Every person, who has grown only a few window plants, has observed the influence of the light, and felt the necessity of turning the plants from day to day to keep them from becoming one-sided and irregular. There is also another point from which the matter should be viewed; and that is its appearance. The ordinary stages are certainly the most formal arrangements possible, and admit the exercise of taste in the grouping of plants to a very limited extent; and thus very much of the gratification which a collection of plants might afford is necessarily lost. It is impossible to inspect them all satisfactorily; and the labor of watering, cleaning, &c., is greatly augmented on these accounts alone. Some system of fitting up the interior of green-houses with *groups* of stages seems to us exceedingly desirable. These would admit of the tasteful grouping of plants, as in a flower garden, and all would be accessible by foot-paths, which also, under such an arrangement, add greatly to the convenience and elegance of the house. Cast-iron appears to us to be the most suitable material for such stages, being, at the same time, durable and capable of being made light and elegant in appearance. It can not be supposed that such groups of stages

would provide accommodation for so many plants in the same house as the common lean-to, triangular, or curved stages; but this is a consideration of minor importance, as it seems to us, in private establishments; for one hundred plants, well grown and tastefully arranged, would certainly yield more satisfaction to the proprietor than one thousand indifferently grown and huddled together on a common stage.

The professional plant-grower must economize his space, his object being, generally, not to grow fine specimens, but to propagate and bring forward into a saleable condition as many plants as possible with a certain amount of heat and house room: all his space must be filled to the best advantage without any particular reference to appearance. Whatever method be adopted in the arrangement and display of plants in houses, it must always be borne in mind that they must be as near the glass as possible, more especially all soft-wooded plants that are liable to be drawn up into lean, lanky forms in the absence of a sufficient degree of light. Large houses generally are difficult to manage in this respect; and this is one reason why we often find very poor plants in elegant houses, and very good ones in what might be considered mere sheds. As the comfort and convenience of a dwelling are more important than the style or appearance of its architecture, so in plant-houses the first and foremost consideration always should be the well-being of the plants; but this affords no reason why good taste should not be exercised as far as may be consistent with circumstances.

Fruits from France.—The Genesee Valley Horticultural Society has received from M. Andre Le Roy, Angers, a box of fruits containing specimens of upward of ninety varieties of pears, twenty-seven of apples, and two or three of quinces. Unfortunately, there were in the collection many early autumn varieties that were in a complete state of decay, and had injured many that would otherwise have come safe. A large proportion of the sorts have already been exhibited in this country; but several new and rare sorts, and even some old varieties not grown here, have been examined with much interest. The fruit committee will make a report hereafter. In the mean time, we thank M. Le Roy in behalf of the Society.

How to Treat Trees received when the Ground is Frozen, or during Freezing Weather.—We occasionally hear of people being quite at a loss to know what to do with trees received in a cold time, or when the ground is frozen. The way is, either deposit the packages in a cellar as they are received, or open them and set the roots in earth until the weather changes: or a trench may be made in the open ground, even if the surface must be broken with a pick-axe, and the trees laid in until they can be planted. They may remain in this state quite safe all winter. Every season we receive packages of trees from Europe in mid winter, and we find no difficulty in taking care of them in this way.

The Early Tillotson Peach.—A short time ago we took occasion to remark on the failure of this variety in the orchards around Rochester. Within a few weeks we have had information from several orchardists in Ohio and Kentucky showing it to be grown there with complete success. There it grows vigorously, is exempt from mildew, and the fruit is large, often eight inches in circumference, and of the finest quality. We predicted many years ago that this peach would be found better suited to a southern climate. This is one of the few instances where a variety succeeds better in other localities than that in which it originated. The *Tillotson* originated in Wayne county, N. Y. In the course of experience we shall, no doubt, meet with similar instances.

LONGWORTH'S PROLIFIC STRAWBERY.—In a note recently received from Mr. LONGWORTH he says: "You will find the *Prolific* of more value than all the seedlings ever raised. We have many good pistillates, but never before a hermaphrodite with all blossoms perfect in both organs, and bearing a full crop of moderate sized fruit. The hermaphrodite fruit is uniformly large and of fine quality." He also asks the question, "If Mr. MEEHAN can, as he says, produce hermaphrodite flowers on a pistillate plant, in pot-culture in houses, what bearing can it have on the necessity of a knowledge of the sexual organs in ordinary American culture?" It is certainly true that however it may be in forcing the strawbery, a knowledge of the sexual organs of varieties is indispensable to out-door culture.

MCAVOY'S SUPERIOR STRAWBERY.—The *Pennsylvania Farm Journal* published some time ago a drawing of this variety quite different from ours—much longer. A correspondent of the *Journal* alludes to this, and asks which is right. In regard to this we can say, that our drawing was a correct representation of the fruit, judging from our own and all other specimens we have seen. Mr. MCAVOY himself says our drawing is a fair one, but not of the largest size. We directed our artist to take from the bed average specimens, which he did. In form the variety is well marked. In all the specimens we have seen there is a greater or less degree of flatness at the point, occasioned, apparently, by a want of filling out in the center.

MCKAY'S ISABELLA GRAPES.—Accompanying the interesting communication of Mr. MCKAY in the November number, was a box of his grapes which we can say, without hesitation, were the largest, best colored, and finest *Isabellas* we have ever seen. If Mr. MCKAY were to write volumes, he could not furnish stronger arguments in favor of his mode of culture. It strikes us, however, that he applied larger quantities of manures than were really necessary. Half a dead carcass, a bushel of well-rotted stable manure, together with leather shavings and charcoal must be admitted to be a very liberal application to the bed of a single vine; but the results speak for themselves, and show at least one thing, that the Grape vine can bear high keeping.

LEPERE'S METHOD OF CULTIVATING AND PRUNING THE PEACH.—We commence in the present number the publication of a treatise by M. LEPERE, translated for the *London Hort. Society's Journal*, describing his system of managing the Peach tree. It will not, we are aware, be of general interest to cultivators in this country, where the peach is cultivated only, or principally, as an open ground standard tree. There are, however, a few exceptions. In some parts of the North the culture of peaches and nectarines in houses and on walls is attracting attention; and the explanation of the principles on which LEPERE'S system of pruning and management depends, must be instructive to every one who cultivates the peach in any form, or under any circumstances: for the habits of growth and bearing are always the same.

THE NEW EARLY FLOWERING CHRYSANTHEMUM HENDERSONI.—This proves to be a real acquisition to our list of Pompones. It has this season bloomed with us about a month in advance of the others. The flowers are of medium size, compact and double, somewhat globular, of a clear yellow. Cuttings struck in July are now pretty dwarf plants in full bloom.

Too Contented at Home! — Can you understand and pity the state of a man too contented with his own home? I am that unhappy creature. I was so unfortunate as to be long in a very confining employment, but with plenty of time to read. Chance threw in my way *Loudon's Gardeners' Magazine*; the whole series I devoured, with all his other books — *Encyclopædia of Gardening, of Plants*, &c., &c. I got to work in a little garden, and soon filled it with walks, and plants, and fountains — birds, fishes, and a miniature plant case — and a plant cabinet. I ousted my wife from her dressing room, and filled it with bees — made more honey than all the family and its relatives could consume, and got tired of the subject. I conceived incredible expectations of a country garden — where I should have space for trees, a conservatory, and a green-house. My imagination ran riot in prospects of constant delights, in perpetually observing the expansion of flowers; never-failing occupation in planting and potting; vegetables and fruits the year round, of my own rearing; and so happy as not to require any other excitement.

I have realized my dream — I am too happy and contented at home! I never have the least inclination to go any where else! unless it be to see some new plant, or an improved mode of cultivating fruit. Society, in its old sense, has lost its charm; parties are a dreadful bore. From morning to night I find new and delightful occupation on my own premises, and dread the sight of a lady or gentleman wending their way through my gate, because of the danger of their occupying my precious time devoted to the companionship of my plants and trees.

Is not this the greatest unhappiness? My friends believe me to be melancholy, unsocial, even demented. Can you, in your "Answers to Correspondents," give me a remedy to cure this new and unheard-of distemper? Before I ask this, I should detail some of the symptoms:

Loudon laid the foundation of my complaint; a visit to the best rural residences in America and Europe increased it; Downing and the *Horticulturist* confirmed it. "Embellish your home" seemed a command that I must obey. I have, they say, succeeded; but my distress continues. I am perpetually striving after new effects; constantly planting out new borders, multiplying new shrubs, or planting new fruits. I have every new Pear set down by the learned pomologists as even "promising well;" have all vegetables, in and out of season. But I have heard of a gentleman in England who "could cut a Pine every day in the year:" must I aim at this too, or must my ambition be confined to the ability of only a daily boquet. Camellias grown in the earth, and attaining the size of Peach trees, are possible things: must my ever-pushing and harrassing hobby drive me to this too? I rise in the morning, full of the work to be done for the day: the day is too short to accomplish my plans. In short, I am *completely happy*, except when the borers take possession of my fruit trees, or the curculio of the fruit,* or I have so much that is excellent as to be compelled to oblige my friends and neighbors with a part.

Pray, Mr. Editor, do give your advice, and a remedy to the very first person that has complained to you that he is "too contented at home." Atticus.

Atticus has presented somewhat of a novel case. A man *too* happy is a *rara avis* indeed. The only remedy we can suggest is, that he immediately agree with himself to think he has attained the *summum bonum* this earth can give; and if he still determines to hug his idea that he is too happy, let him enlarge his grounds by fifty more acres, build ten more green-houses and conservatories, and be *entirely* happy. After he has done this we will advise further.

In some parts of Illinois, Iowa, and Wisconsin there have been frosts of unusual severity — destroying whole orchards of fruit that had not been gathered. Previous to this occurrence the fruit crop was unusually fine, and had given great encouragement to the extension of orchards.

* If the borers should write a book on "Insects Injurious to Fruit," they would assuredly class man as the most destructive.

HORACE GREELEY'S ADDRESS BEFORE THE INDIANA STATE AGRICULTURAL SOCIETY.—We have not in many a year read an Address of this kind with so much interest as we have this. The main points are:

ECONOMY OF MEANS;

NECESSITY AND IMPORTANCE OF SCIENCE;

DRAINING, DEEP PLOWING, AND IRRIGATION;

WHAT THE SISTER ARTS TEACH AS TO AGRICULTURE.

These topics are all discussed in such a manner as to show that Mr. GREELEY is well informed respecting the condition of American agriculture, and his illustrations are so fresh and forcible that they can not fail to awaken an impulse toward improvement in every one who has heard or read them. If our space permitted we should gladly transfer the entire paper to our pages, but we must content ourselves with a few extracts, which are no less applicable to agriculture than to horticulture.

"*Deep Plowing, Draining, and Irrigation.*—The three main features of agricultural advancement among the Anglo-Saxon race are: 1. *Deep Plowing*, or *Subsoiling;* 2. *Draining;* 3. *Irrigation.* I am quite aware that draining should take precedence in the order of time, yet I believe, in point of fact, deep plowing has led to draining by demonstrating its necessity, and not draining to deep plowing. We suffer immensely from drouth in this country. Probably the aggregate annual loss from drouth alone throughout the Union decidedly exceeds, taking one year with another, the entire cost of our Federal Government. Yet we know that the roots of most plants will descend to moisture, no matter how dry the surface, if the earth beneath them is porous, mellow, and inviting. Hence we realize the immense importance of deep plowing; and after doubling our teams and sinking our deepest plows to the beam, we summon to our aid the subsoil implement, and go down a depth beyond that of any single furrow. But we soon find that the pulverization of the subsoil, thus attained, has no permanent effect; that the water that leaches down to it settles it into a compact, solid mass, which the roots can not perforate and all our subsoiling needs to be done over again. The remedy that readily suggests itself is the freeing of the subsoil from water by drains sunk below it—say three to six rods apart—and filled half way up with pebbles, with flat stones forming a sort of culvert, or, still better, laid with draining tile or hollow brick, placed end to end, and forming a continuous channel from the highest part of any slope or grade to the brook which drains it. And now the subsoil, supposing the drains well made and the drainageway sufficient, is readily freed from any water settling into it, and long retains the porous and permeable character communicated to it by deep plowing.

Of course, this does not exhaust the good effects of draining. The subsoil, thus loosened and freed from excessive moisture, becomes a source of food as well as drink to plants growing above it; for that it is capable of feeding plants, no one, who has observed the rank vegetation growing out of the earth thrown up by draining or digging, can doubt. Instead of being like a slough in wet weather, and like a brick in dry, the subsoil retains sufficient moisture to cheer the plants, but too little to indurate itself. And the mean temperature of the soil, hitherto lowered by the constant evaporation of the water contained in the subsoil, is raised several degrees by the sun's rays, no longer counteracted by the evaporating process—at least, not to any such extent as before—so that the plants grow more luxuriantly, mature more rapidly, and so are earlier out of danger from frost. And beside this, the constant passage of currents of air through that portion of the drain not occupied by water—and each drain should have an opening at its head as well as at its mouth—is an additional source of fertility through the chemical combination it insures. It would be difficult to overstate the value, the importance, the profit of draining.

"Many are accustomed to say, '*This* land needs no draining,' meaning that it is not habitually too wet. But draining proves as useful, if not as imperatively necessary, on dry soil as on wet. On dry lands it is required that the subsoil, once broken up and pulverised, shall not, by the

settling of moisture therein during the wet season, be hardened and rendered impervious again; these lands need to be rendered porous and penetrable by roots to a greater depth *because* of their dryness; they need to be shielded from the pernicious effects of constant evaporation in cooling the soil, and thus retarding the growth of its plants. There is very much land not worth tilling; but there is none that will justify tillage which would not reward draining.

"Of irrigation we in this country know but very little by experience; but we are destined soon to know more, and to be profited by our knowledge. True, there are lands that may be readily drained and subsoiled that can not so readily be irrigated, owing to their elevation and a deficient supply of water. I apprehend, however, that these lands are not to be found in Indiana, nor in any other Prairie State, whose first peculiarities that strike a stranger are a superabundance of water in the rainy season, and a scarcity thereof in the dry. The time is at hand when you will here require extensive and powerful pumping apparatus, if only to raise water for your heavy stocks of cattle, and convey it to the pastures wherein they will be confined; and why not raise enough of the grateful fluid to refresh pastures and cattle alike?

"But even though this assured and ample resource were non-existent, I maintain that water enough falls on your fields every year to keep them fresh and luxuriant through the summer, if it were saved and not wasted. But most of it falls during the seasons when least is wanted, and is suffered to run off to the rivers and the ocean, carrying very much of the best juices of the soil along with it, when it should be retained in ponds and reservoirs to be pumped into barnyards or drawn off to irrigate the field during the fervid heats of summer. The apparent difficulty of doing this would vanish, and the presumed expense be materially lessened on careful consideration.

"I know not that I have traversed any country with more lively interest than beautiful, bountiful, picturesque Lombardy. The dark pall of Austrian despotism enveloping it did not suffice to dim its natural loveliness and luxuriance, so greatly improved by the labor and genius of man. It seems to have grown into this system of almost universal irrigation by imperceptible and unmarked degrees, and to be now producing double harvests annually as the result of some fortuitous impulse, rather than of foresight and deliberate calculation. The magnificent plain of Upper Italy, which has for so many centuries been the field of combat where Goth and Latin, Frank and Hun, Gaul and German, have struggled for the mastery of Europe, slopes almost imperceptibly from the Alps to the Po, and the impetuous torrents which tear the rocky sides of the snow-crowned precipices are arrested and chastened in the blue lakes which lie at the foot of the mountains, smiling serenely out upon the plain. Thence the waters proceed with a more gentle and measured cadence to the great river, and are drawn off and stayed from point to point to fill the irrigating canals, and ensure a rich reward to the husbandman's labors. Let any stream from heavy rains become a raging, foaming, milky torrent, and its waters have a value which the pure element could not command, and are drawn off on every side, until the canals and reservoirs are filled, and all danger of inundation precluded. Thus the waters are most valuable for irrigation just when they are most easily and abundantly obtainable for that purpose. The water which has irrigated one fertile garden or field, far from being exhausted, has been rendered more nourishing thereby, and may now be drawn off to fertilize the next field lying an inch or so lower, and thence to the next, and so on to the river, enriching and gladdening all it touches on its way. Irrigation is the life-blood of Lombardy; shall it be nothing, teach nothing to us?

If there be a country on earth which one would suppose irrigation unsuited to, Great Britain is that country. Her exceedingly moist, cool climate, coupled with her compact, clay subsoil (not universal, but very extensive), would seem to render a deficiency of moisture one of the very last evils to be apprehended or guarded against in her agriculture. And yet her best farmers are now embarking rapidly and extensively in irrigation, finding it practicable and immensely profitable. Not here as in Lombardy is the natural flow of the streams, in their descent from the hills to the rivers, relied on; but great pumps are employed, raising water by steam or other

power from rivers, brooks, and ponds, to a height whence it is carried by gravitation through metalic and gutta-percha pipes to every point where it is needed. Mr. Mechi, the ex-London merchant, who retired from trade with a competency to earn another by scientific farming, takes the lead in this application, and his estimates of the increased productiveness of lands by reason of irrigation and the profits thus secured would seem wild to any audience, unfamiliar with the subject. I may state, however, that he fixes the expense of conveying his manures in a liquid form from his yard to every portion of his estate as equivalent to one penny sterling, or two cents per cart load—that is to say, the fertilizing properties which were contained in a tun of muck or compost are now conveyed to the soil that requires them at the cost of one penny. That loading, teaming, unloading, and spreading in the old way must have cost far more than this, you can not doubt; and beside, the fertilizing liquid, being entirely free from seeds or weedy germs of any kind, and in a condition to be readily and totally absorbed by plants, must be worth twice as much as if applied in the old way. Now consider that this load of manure has been conveyed through and applied with many tuns of water, just when the soil is most thirsty, and the plants most needy, and you can readily judge that the tun of manure dissolved in water and applied through irrigating pipes at the cost of a penny, must be worth at least thrice as much as the same tun applied in the crude, solid state, at a cost not less than thrice that sum. But I must not dwell on details. You have the general idea, and can follow it out at your leisure into all its necessary results.

"*The Proportion of Means to Ends.*—And here let me retrace my steps to illustrate a point in Industrial Economy which I have already incidentally touched, but have not illustrated as its importance deserves, and as the prevailing misconceptions render necessary. I refer to *The Proportion of Means to Ends*, which the artisan must always bear in mind, but which the farmer seems too often to forget. No artificer presumes that the labor and material required for a fine table will suffice for a piano forte, nor that a steam engine can be constructed as cheaply as a churn. But the farmer, seeing trees and plants grow around him with weed-like facility and tenacity, often indolently imagines that *any* tree will grow so, and plants his rare and delicate fruit trees, if he plant such at all, as if they were Oaks and Locusts. But Nature is inexorable in her requirement that the labor and care essential to the production of a choice fruit or plant shall be proportionate to the value of the product. You may grow Pine on yellow sand, or Hickory on blue clay; but if you want choice pears or peaches you must devote much labor and expense in preparing and enriching the ground wherein your trees are to be set. Too many farmers, not heeding this law, or supposing that Nature may somehow be circumvented, obtain worthless fruit, or none at all, and so abandon the culture in disgust and despair.

There is not one Grape vine or fruit tree, except of the coarsest and commonest kinds, where there should be twenty, taking one State with another: and one consequence of this is an enormous and perilous consumption of flesh as food, to an extent unknown in other countries. We are nationally surfeited with pork and tainted with scrofula, not because we are so fond of pork, but because for an important portion of each year, the majority of our population can get little beside. 'The foolishness of preaching' will never suffice to correct this aberration; for men who work must eat, though their food be not the best; but give us an abundance of the choicest fruits and vegetables, with farmers who know how to grow them, and truly educated housewives, who delight in preparing and serving them, and we shall enjoy health, elasticity, and longevity to an extent now unknown. A flesh diet is the dearest, the least palatable, and the least wholesome, and all that is needed to wean men from it is the presentation of a better. To secure this, we need only farmers who will feel a just pride in having the finest orchards and gardens; who will surround, not merely their own dwellings, but those of their tenants and helpers also, with choice trees; and who will plant and keep planting until good fruit shall be so abundant that it can be no longer an object to steal it."

THE CATAWBA GRAPE.—To me one of the greatest pleasures of life has been the culture of trees and growth of fruit, and the success of others in so doing has always been extremely gratifying. Our seasons, at Rochester, N. Y., are not always favorable to the ripening of grapes, especially the *Catawba;* but the warm and dry weather of the summer and early fall months of 1853, has perfected all the varieties grown with us better than I have ever known before.

One of our townsmen, Mr. JACOB GRAVES—one of the *pioneer* citizens—has produced the *Catawba* this season of the very best quality, full as well ripened, and sweet, and luscious, as the same kind which I have seen grown at Cincinnati; and I have been to see how he trains and keeps his vines.

On a southern exposure, on a trellis entirely independent from his house, he has three vines, some four years planted, which have made good growth and borne plentifully. They have been annually pruned in February, and in the fall had finely pounded *horn piths* put under cover of the earth around the roots, which has proved an excellent fertilizer. With a free circulation of air, and plenty of sun, the grapes have ripened beyond any thing I have ever seen, fully as sweet as any I ever tasted grown under glass.

Judicious pruning, and free circulation of air, all grapes require; and we only need to bestow that care to have the luxury of *sweet, well flavored* grapes, from October till April.

Mr. LONGWORTH, of Cincinnati, in acknowledging the receipt from me of a barrel of *Clinton* grapes, speaks very highly of them, as well ripened, and likely to prove a fine wine grape. They are most certainly a choice table variety, and worthy of cultivation. J. H. WATTS.

Mr. WATTS very kindly gave us an opportunity of tasting the *Catawbas* to which he refers, and we cordially agree with him as to their excellence. We may state in this connection that on our own premises the *Catawba* has ripened completely, and attained its highest perfection on a south wall of a house, while on an open wire trellis in the garden it had just begun to color when the frost came, and, of course, it did not become eatable.

TOMATO WINE.—I was presented by WELLINGTON ROSE, of the United Society, at Hancock with a specimen of wine manufactured from the juice of tomatoes, which so closely resembled old Madeira that it would have troubled an amateur to detect the difference. This wine was of the manufacture of 1851—so it was two years old. How far greater age would improve it we can not say; but as it is now we think it must be a valuable article for invalids, if we take into account its agreeable flavor and the undeniably great medical qualities of the fruit from whose juice it was manufactured.

The precise process of making this wine we have not fully learned, as the manufacturer claims he shall probably make improvements in the business. When this is done, from his known philanthropy, we have no doubt he will communicate to the public all the facts in the case, and become a greater benefactor to the sick and infirm, not only by furnishing the article ready made, but by telling others how to manufacture their own. W. BACON.—*Richmond, Mass.*

STRAWBERRY QUESTION.—Having learned through a friend that Mr. PRINCE, in the *Pennsylvania Farm Journal*, had challenged any person to produce a perfect fruit on a pistillate variety of strawberry, without staminate influence, I wish to state that I have at present a plant of *Black Prince* in a pot, with a truss of (to all appearance) perfect fruit. There has not been any staminate in flower here for some months; neither do I suppose there are any in this neighborhood at this particular season. There can be no mistake in this instance, for I observed the flowers closely on their first appearance, as also on their subsequent development, convinced that the opportunity was one to test the matter fairly, not being a season when strawberries generally flower, so that there could be no chance of pollen being introduced from any source. I expect, however, to find the fruit seedless—at least, the seeds imperfect. WILLIAM SAUNDERS.—*Baltimore.*

Ripening of Fruits.—In compliance with a request published in the *Horticulturist* some time since, the period of the ripening of the following varieties of pears and early apples is given. This place is thirty-one miles west from, and in the latitude of, Philadelphia. Soil in the valley, clay loam; lime stone "crops out." The rocks and surface stones on the south hills, nearest which the trees grow, are gneiss or micaceous slate, and occasional boulders of trap.

The manner pursued in making this list, was to note the period when the first perfect specimen ripened on the tree, and the last in the house. In some instances the *quantity* was limited, and the period of duration consequently shortened. It is well known to most of your readers, that by artificial means that period may be very much prolonged.

Apples.—Early Joe ripened from July 25th to August 10th. Brenneman, August 1st. Porter August 5th to September 5th.

Pears.—Madeleine ripened from July 10th to 22d. Meynard, July 22d to 31st. Jargonelle, July 27th to 30th. Osband's Summer, July 30th. Bloodgood, July 29th to August 5th. Belle of Brussels, August 1st to 22d. Deux fois l'an, August 2d to 13th. Sanspeau, August 4th to 14th. Dearborn's Seedling, August 4th to 15th. Tyson, August 4th to 30th. Summer Franc-real, August 5th to 15th. Schenck's, August 5th to 25th. Julienne, August 8th to 30th. Summer Rose, August 6th to 30th. Steinmetz Catharine, August 10th to 30th. Bartlett, August 10th to September 20th. Washington, August 15th to September 5th. St. Ghislain, August 20th to September 10th. Flemish Beauty, August 22d to September 22d. Fondante de Malines, Stevens' Genesee, Capiaumont, Andrews, Fondante d'Automne, Napoleon, Lodge and Diller, all ripened August 25th, and continued until September 5th and 7th, except Capiaumont, which was "very good" until September 30th. Doyenné Boussouck, August 29th to September 5th. Pennsylvania, August 30th to September 10th. Hawthorn, August 25th to September 18th. Hews, August 25th to September 7th. Seekel, September 1st to October 15th.

You are at liberty to use these "rough notes" as suits your convenience, and can have a continuance of "more material, if desirable."

It would probably meet your views, if in future none should be given unless they are deemed worthy of culture in this location, or rank at least "very good." Such are not all of the above. J. K. E.—*Dowington, Pa.*

Mr. Longworth on the Strawberry Question once more.—A Proposition.—I regret to learn that your brother of the *Prairie Farmer* has not faith enough to accept my proposition, in regard to the sexual character of the Strawberry. I will test it further. The *Hudson, Necked Pine,* and *Hovey's,* he says, with him were separate, and each pure; each bore staminate and pistillate blossoms. If he will send plants of these kinds to Messrs. Buist & Brinckle, and either of them, in adjoining beds, will bear perfect fruit, with no other kind within one hundred yards of them, I will present him with a silver pitcher, of the value of $100. If they will, as he states they did with him, bear staminate blossoms, I will present him with a like pitcher, of the value of $100. If he will get these gentlemen to certify their belief in the changes accomplished by him, or those by Mr. Meehan, and which he says "*renders our Strawberry theory worthless,*" I will send him a like pitcher. I fear Mr. Meehan's mind is wandering on the subject. If he could, by artificial heat, produce a change in the sexual character of some blossoms, the children of our market gardeners would say it has no bearing whatever on out-door culture. W. Longworth.—*Cincinnati, O.*

P. S.—I am not personally acquainted with the horticultural editor, Dr. Kennicott. I request his opinion, in your next number. If he believes in the sexual changes in your three kinds of plants, I will believe in Rochester knockings. If he believes in the sexual character undergoing no change, he owes it to his station as editor, and the Strawberry growing community, to correct the error, and will do it.

SHENK PEAR.—No one could give a truer history of this pear than that friend of horticultural improvement, J. B. GARBER; but for the sake of pomological nomenclature, let it henceforth be called *Shenk*, or *Schenck's*, which is outlandish enough, *sans culotte*. A familiarity with this variety for years in its native locality, led me to estimate it highly; but having fruited it here for three years, my opinion is changed. It ripens only a few days earlier than the *Bartlett*, and is much inferior. It cracks badly, and among dozens not a perfect specimen is obtained. In those regions where the *White Doyenné* fails, it will be well to adopt it with caution. J. K. ESHLEMAN.—*Downington, Pa.*

THE VICTORIA REGIA.—Mr. JOHN SAYERS, of Cincinnati, writes us: "I have been very successful with the *Victoria regia*, and have it now finely in bloom; have had leaves six feet three inches in diameter, which "astonished the natives" out here. It flowered for the first time on the evening of September 23d, at the time of our Horticultural Exhibition. I exhibited a leaf and flower, which attracted the attention of a great many to the Exhibition."

BOOKS AND PAMPHLETS RECEIVED.—From WM. BREWSTER, Esq., Montreal, *River's Orchard House; or, The Cultivation of Fruit Trees in Pots Under Glass.* Second edition: 1853.

— *The Provincial Prize List of the Agricultural and Industrial Exhibitions of Canada for* 1853.

Answers to Correspondents.

I SEND you by express a small box containing a stem of my *Chautauque Perpetual* strawberry, found a year since in the field. It has been in bearing since June just as you see it now—blossoms, green, and ripe fruit. What is it? and is it like any of the other Perpetuals? The sets of this year are also in blossom and fruit. L. RISLEY.—*Fredonia, N. Y.*

The fruit came quite fresh, and has all the appearance of an *Alpine* strawberry.

LIME AND SULPHUR VERSUS THE CURCULIO.—In the September number of the *Horticulturist*, page 428, I read a communication from THOS. W. LUDLOW, Jr., Yonkers, Westchester county, N. Y., in which he says: "This is the third season that I have been successful in destroying the eggs of the curculio, after they were deposited on the fruit; and I do therefore feel assured that the compound used by me is an effective remedy. I strongly recommend its general use, and if it be thoroughly applied," &c. Now, as I wish to become acquainted with the manner of making the application of this remedy (lime and sulphur), by republishing the original article you will confer a great favor on at least one new subscriber. E. P. GOODSELL.—*Hartford, Conn.*

The following is the article referred to by Mr. GOODSELL:

RAVAGES OF THE CURCULIO PREVENTED.—The accompanying box will show evidence for itself, that I have, for the second year, found means of arresting the fearful progress of the curculio, which is by syringing the trees, after the fall of the blossom, with a mixture of whitewash and flour of sulphur, in the proportion of eighteen double handfuls of sulphur to a barrel of tolerably thick whitewash, made of unslaked lime. The sediment of this mixture will answer for a second and third barrel, merely filled with water, and well stirred.

I applied the above three times a week for four weeks, and have met with great success, having been obliged to prop the limbs to sustain the weight of the fruit. The trees are ten years old, and have blossomed every spring, but have never until last year ripened any fruit.

The specimens I send you are *Bolmar's Washington*, and you will observe upon some of them the marks of that little infamous Turk, which are nicely healed over, leaving the crescent to light up those who may have doubts that they are the production of a curculio district. Syringe well, and although the fruit may be stung, it will come to perfection.

I am glad to find that Mr. STOKES has also been successful in raising this most delicious fruit; and his idea of coloring the whitewash is a good one, as it does away with the glaring effect given by the lime.

I have doubts of the practicability of using a rose upon the tin garden pump, as it will soon stop up with particles of lime, and become useless. I prefer the lip which generally comes with these pumps. This may be bent in such a manner as to flatten the stream as it passes out the spout, and thus disperse it over the tree. I did not notice that any of the fruit withered or turned yellow, as spoken of by Mr. STOKES — of course there were some, as is the case in the best plum districts, that decayed and fell from the trees, making room for those that are left to have a chance to swell.

I AM a subscriber to your periodical. I reside in New Jersey, and do business in New York. If the inclosed paper is correct, why can not we have strawberries in the same manner in our locality as they have them in Columbus? Please notice this communication in the *Horticulturist*, and oblige a true friend seeking information. A. F. B.

"A correspondent of the *Cincinnati Gazette* thus describes a visit to the estate of Mr. PEABODY, an eminent horticulturist near Columbus, Georgia:

'Mr PEABODY has a very healthy location on a hill in the pine wood—over six hundred acres; and when they went on it, thirteen years ago, not a tree had been cut. He cleared a space for his house, and then moved in the next spring. He has proved the most successful cultivator of several kinds of fruit, berries, and melons in this country. I saw one thousand hills of watermelons, on which will be ripe fruit by the 10th or 15th of June; he says he has frequently picked them weighing fifty pounds. His great peculiarity with strawberries is the quantity of fruit, its size, and flavor, and the *constant bearing* of the vines; always has plenty of fine berries for six months—frequenty eight—and last season he had them every month in the year. Recollect this is in the open air—in his open fields. I saw eight acres of strawberries; the vines are very small, and covered (the ground literally looks red) with most delicious *Hovey* berries. These vines have been in just as full bearing since the 10th of March, and he says will continue until the middle of September, and as much longer as frost keeps away, if he chooses to attend to them. Mr. P. sends to this market from 150 to 200 quarts per day, and says he could pick double the quantity if the market was larger.'"

There are but two ways to have strawberries in *constant* bearing: one is, and the most practicable, to plant the *Monthly Alpine*, furnish them liberally with water in dry weather, with an occasional application of liquid manure, and you can have fruit from June to October. Another way is, to have a stock of plants retarded by removing the blossom at the usual season, and bring them forward when the first crop is passed. This requires the exercise of much skill and a considerable amount of labor. We think there is a mistake in the above newspaper extract in regard to *Hovey's Seedling* bearing from the 10th of March until September.

Horticultural Societies.

The Cincinnati Horticultural Society met Saturday, Sept. 10th, 1853, Dr. Mosher presiding.

Minutes of the last meeting read and approved.

M. T. Winter presented two reports of the Philadelphia Horticultural Society; one of them on Insects was referred to the committee on Insects; the other on Fruits to the Fruit committee.

The following gentlemen were appointed a special committee, as the fruit committee was absent: Messrs. Buchanan, Kelly, Hatch, Hill, Graham, McAvoy, Duhme, Anthony, and Dr. Warder.

The President appointed the following gentlemen as delegates to the North Western Pomological Association, to be held at Chicago on the 4th and 7th, inclusive, of October: R. Buchanan, Freeman G. Cary, Dr. W. N. Brisbane, Dr. J. A. Warder, Wm. Heaver, A. H. Ernst.

Mr. Hatch, of the Wine committee, reported a communication from Mr. Longworth, bearing date August 27, 1853, in regard to the weight of must of the Clinton grape, and propounding the inquiry "whether the weight of the must in all grapes is a certain indication of the saccharine quality of the grapes, and the strength of the wine it will produce."

As this question will require a careful examination, and a perfect test by experiments, in order to arrive at a satisfactory solution of the subject, the committee respectfully request the Society to refer the matter to a select committee of grape growers, with a request that such committee would, in the course of the present season, make all the experiments necessary to the ascertainment of the facts involved in the subject.

The committee think the subject an important one, and hope that the reference will be made, and that such committee will report the result of their inquires and tests to the Society at as early a period as may be practicable.

The following gentlemen were appointed said committee: Dr. Rhefus, Dr. Warder, and R. Buchanan.

The following should have been received with the very fine pears exhibited last Saturday without a name; it is from Thorp, Smith, Hanchett, & Co., whose contributions are most cordially welcome:

"Syracuse, August 27, 1853.

"We yesterday directed to the Cincinnati Horticultural Society a small box with two specimens of the Hosenschenck pear. They were pulled green and packed away in buckwheat chaff, and have imbibed a musty taste from the chaff. The fruit is large; flesh exceedingly juicy, melting, and refreshing, as good as any Virgalieu we have tasted for five years, and equaling the Onondaga in every respect. When fully matured, they are of a rich, golden yellow, with a beautiful red cheek on the sunny side. They are certainly the best summer pear in America. Ripens from the tenth to the last of August. We can give you a full history if desired. The trees have been so full this season that the fruit is below size."

The Secretary presented a schedule of premiums offered at the Annual Exhibition of the Kentucky Horticultural Society, to be held in Louisville on the 28th and 29th of September, 1853. On motion, all that can go may be appointed by the President delegates to this and other exhibitions.

The following invitations were read, and, on motion, adopted, and the thanks of the Society ordered to be presented by the Corresponding Secretary:

"New Haven, August 20, 1853.

"*To the Cincinnati Horticultural Society—Gentlemen*:—At a stated meeting, the Board of Directors instructed the Secretary to invite your Society to visit, by delegation, the Annual Fair of the New Haven Horticultural Society, to be held at the State House, in New Haven, on the 28th and 29th of September next. Very respectfully, Geo. Gabriel, *Secretary*."

John P. Foote, Robert W. Burnet, and George Graham, were appointed delegates.

"The Butler County Agricultural Society, through John M. Millikan, extend a cordial invitation to the Cincinnati Horticultural Society to attend their third Annual Fair, at Hamilton, Ohio, on the 15th and 17th proximo; and appoint John A. Warder and George Graham on the fruit com-

mittee; Wm. Heaver, with S. S. Jackson on the flower committee; and Peter Melendy on poultry. Gov. Corwin is to deliver the address."

"*To the Cincinnati Horticultural Society*:—Our brother Foote, the great advocate for the superior quality of the White Scuppernong grape of North Carolina, I am pleased to say, has now an opportunity to prove its superiority as a table grape. The question of its wine qualities I yield, by admitting that it would be a greater miracle than the Rochester knockings if it is not superior as a wine grape to its table qualities. You last season saw the famous Connecticut Charter Oak grape, for which some of our brothers paid from three to five dollars per root. You will readily admit that if thickness of skin and hardness of pulp are desirable qualities, the Scuppernong is superior to the Charter Oak Fox grape. The leaves came with the grapes, and to prove them genuine I send you fresh leaves of the Scuppernong in my garden, sent me from Carolina. I send you with them one of my Fox grapes (Minor's Seedling), that the great superiority of the Scuppernong may be stated. I send you a bunch of the Marion grape, Lee grape, and blue-black Chillicothe Seedling, that you may state their relative qualities as table grapes. Also the Union Village grape, to test its size, thinness of skin, softness of pulp, and its abundance of juice, in comparison with Mr. Resor's extra sized Black Hamburghs, raised under glass. I also send a bunch of the Arabia Seedling grape, sent me by express by Mr. James M. Hannah, of Salem, N. J. I send a bunch of the Isabella grape, to test the quality of the Marion, the Lee, and the blue-black Chillicothe Seedling with it, as they all bear a resemblance to it. They are all, in my opinion, superior. If the Marion retains its qualities of the last two years as a table grape, I shall deem it worth a million of dollars, if as hardy east as the Isabella. It is a much better bearer than the latter, ripens uniformly, the bunch and berry larger, and I deem it of far superior quality for the table. I do not send the Express grape, as it is not ripe. The others would have improved on the vine for two weeks." Respectfully, N. Longworth.

"September 10, 1853.

On motion, adjourned. J. C. JEFFERIES, *Secretary.*

Fruit Exhibited.—*Apples*—By R. Buchanan—Baldwin, Alexander, Gravenstein, Summer Queen, Red Fenouillett, Harrison, Newtown, Spitzenburgh, Red Bellefleur, Ashland, Scholl's Red Winter, Sweet Pearmain, Minister, Satch, Blenheim Pippin, Prior's Red, White Bellefleur, Yellow do., Belmont Delight, Maiden's Blush, Fall Pippin, American Golden Pippin, Red-Cheeked do., Green do., Dutch Codlin, Golden Spice, Fallawater, London Sweet, Rhode Island Greening, Holland Pippin, 14 varieties, names unknown; in all, 44 varieties.

Pears—Bartlett, Seckel, White Doyenné, Duchesse d'Angoulême, Stone's Seedling, one, name unknown.

Plums—Flushing Gage, Blue Gage, Canada Red, Diamond, Bleeker's Gage, Blue Imperatrice, Yellow, and two, names unknown.

Pears—By M. S. Wade—White Doyenné, French Butter, Napoleon, Swan's Orange, and Autumn Superb.

By A. M. Ernst—Seckel pears.

By M. W. Carey—Two very large and beautiful apples, called the King Pippin.

By J. C. Jefferies—Bartlett pears.

By P. S. Bush—Yellow Egg plums.

Grapes—By N. Longworth—Isabella, some of the berries, as usual, unripe; Scuppernong, pronounced Muscadine, of the Southern States, a very inferior grape in every quality except size of berry; Union Village, or Shaker grape—bunch medium size, berries larger than the best Black Hamburgh grapes from the hot-house of Wm. Resor, black, round, skin and pulp as delicate as Black Hamburgh, flavor agreeable, rather acid and musky, but inferior to Black Hamburgh; Marion—resembling Isabella very much, but with a larger and better ripened bunch, and a sweeter and more musky flavor; Lincoln—bunch small and closely set, berry small and black, with thin skin and pulp, flavor inferior; Blue-black Chillicothe and Lee—both pronounced Isabella; Arabia—inferior in size and every quality to Isabella.

From Wm. Resor—Splendid samples of Black Hamburgh and Victoria grapes, from under glass.

From George Graham—Very good Black Hamburg grapes, grown and ripened in the open air.

From P. Outcalt—*Pears*—Napoleon, White Doyenné, Stevens' Genesee, Fall Butter, Bartlett, Bezi de la Motte, Prince de Printems.

From T. V. Penticolas—*Pears*—Bourse, Amalia, Beurré Bosc, Cumberland, Seckel, Golden Beurré of Bilboa, Louis Phillipe, Fall Butter, Beurré de Capiaumont, Bon Chrétien, Fondante Beurré. *Apples*—Maiden's Blush, Blue Pearmain.

Flowers.—By T. S. Jackson—A large collection of seedling Verbenas, among which were several very distinctly marked, and equal to any in cultivation here; also, a seedling Dahlia, of promising character.

Horticultural Department of the Provincial Fair, Upper Canada.—The floral hall, which is at all times the principal attraction, was situated on the summit of the elevation. It was one hundred and twenty feet long by eighty feet broad, forming a center hall about twenty-four feet wide the whole length, and two side halls also the whole length of the building. The eastern side hall was devoted chiefly to the flowers and vegetables.

There was a good display of annuals and Verbenas. The display of Dahlias was not so great. There were some very tastefully done up table boquets. There was a very pretty floral design by Mr. Kerr's gardener, filled up in the different plots with Asters, Marigolds, Verbenas, &c. There was a fine box of annuals from Messrs. Thompson & Murray, of the City Gardens, Hamilton. Judge Campbell, of Niagara, had some very good Cockscombs, seemingly the same that figured at the Horticultural Show in Toronto lately, and received so much merited praise. J. F. Moore, of Hamilton, had a very fine display of Balsams. Eneas Kennedy had a very good collection of plants, from his own private garden. Mr. Fleming, of Toronto, had a pretty fair collection of green-house plants. Thomas & Murray had a very pretty flowering Jasmine, very useful and suitable for a hall window; it flowers in the early part of the season, and gives out a powerful and most delightfully fragrant odor. They had a fine specimen of Veronica, and a very pretty Gesneria zebrina, a plant of beautiful foliage. The Torenia Asiatica, from the same gardens, was a very fine specimen, with a beautiful soft blue Memulone flower. It grows easily, and flowers freely; but requires a good deal of heat to bring it to perfection. There was a very graceful Japan Pine from the same garden. This plant is well adapted for a conservatory. The Lantana Ewingii, a flower something like a Verbena, but more variegated. The flower first becomes orange, it then fades to a fine soft pink, and from that comes nearly to a white, the flowers appearing in all their different stages in one plant at the same time. It flowers from the beginning of June all the way to winter, and is well adapted for bedding out. It has been only recently introduced. There was one plant, a native of California, termed the Zauchneria Californica, with a beautiful scarlet flower, resembling a Fuchsia somewhat. This plant is also well adapted for bedding out. J. F. Moore exhibited a very healthy India Rubber plant, and one Orange tree, with one specimen of the fruit upon it. There were two fine specimens of Aloes, and a very fine specimen of the Abutilon striatum, with a beautiful striped well-shaped flower; a considerable variety of Cacti, and a rather curious plant—the Æschynanthus zebrina—from the same garden.

On the opposite side of this hall there was a great display of cabbages, chiefly from Toronto gardens. There were also squashes, in great variety; celery, large beets, and also some remarkably fine table beets. Mr. Lesslie showed a good collection of pears and quinces, of very fine quality. In the western hall there was a most magnificent display of white and red onions, the finest by far that has yet been exhibited at any of our fairs. There were some tomatoes of a very large size, but not very tempting; there were some very fine small ones. There was a display of white table turnips, very fine. The capsicums were a very good display. There were some good cauliflowers, two heads especially very fine. The chicory looked well—it was chiefly from Pear's garden, Yonge street. The carrots were a very good display. There were three baskets of varieties of vegetables. The Baron de Lougueuil displayed some very fine egg plants, of a large

size. The watermelons were rather an ordinary display. The Normal School, Toronto, exhibited specimens of the production of the experimental garden: there were cabbages, oats, barley, potatoes, corn, carrots, beets, mangel wurzel, turnips, &c., &c., with a full report of the quantity raised, and all the particulars connected with the various specimens.

The peaches were a very good display. There were some very excellent hot-house grapes, from W. H. BOULTON's garden. ENOCH TURNER and W. B. JARVIS, of Toronto, and W. P. MCLAREN, of Hamilton, had also some very fine specimens. There was a very prolific specimen of grapes, we think from Mr. LEWIS, of Salt-fleet; there were upwards of forty bunches on one vine about three feet long. Mr. HUMPHREYS, of Toronto, exhibited a basket of very excellent Sweet Water grapes. This was decidedly the best specimen of that kind of grapes in the exhibition. There were fifty-six different entries of "twelve winter apples." The winter table apples made a very good display. The Ribston Pippins were very fine. There were some excellent baking apples, from LESSLIE's Garden. There were seven entries of twenty varieties of apples, some of them very fine, from LESSLIE, TURNER, and BRUCKLY, of Hamilton, and others.

Dr. CRAIGIE's son displayed some very fine specimens of dried plants, very well prepared. There were only a few of them displayed, the greater part of them being left in the portfolio.

MOBILE (ALA.) AGRICULTURAL AND HORTICULTURAL SOCIETY.—We have just received a circular from the Secretary of this Society, containing an account of the organization of the Society on the 20th of February last, and other matters, showing the Society to be in a prosperous condition. We copy from the circular:

"At the first meeting after the organization, it was voted that $500 be set apart for premiums, to be awarded at the first Fair, which was arranged to take place on the 24th of May. Unfortunately, the period was unpropitious, being too late for most of our choice flowers, and too early for fruits. As it was, however, we made a very respectable exhibition, the floral display being very gratifying, and the collection of vegetables superb. There was competition for all the prizes arranged by the committee, and all classes of our community manifested much interest on the result of the Fair."

President—CHARLES C. LANGDON.
Vice Presidents—CHESTER ROOT, GEO. N. STEWART, JOHN C. HODGES.
Corresponding Secretary—W. W. MCGUIRE.
Recording Secretary—SAMUEL PENNY.
Treasurer—A. L. POPE.

CALIFORNIA GRAND AGRICULTURAL AND HORTICULTURAL FAIR.—We have received from Messrs. WARREN & SON, of San Francisco, a circular containing a premium list amounting to about *two thousand dollars!* The Fair was to be held at San Francisco, and continue one month. We notice a premium of twenty-five dollars offered for the best one hundred acres of potatoes. This looks like doing things on a large scale. We copy the premiums offered on fruit:

"For the finest display of grapes, a silver cup, $25. For the finest display of melons, a silver cup, $25. For the finest basket assorted fruits from one cultivator, a silver cup, $25. For the finest specimens of native grapes, a medal, $10. For the finest specimens of figs, a medal, $10. For the finest specimens of pears, a medal, $10. For the finest specimens of apples, a medal, $10. For the finest specimens of peaches, a medal, $10. For the finest specimens of watermelons, $5. For the finest specimens of muskmelons, $5. For the finest specimens of egg plant, $5. Every dish of fruit of rare or new kinds, esteemed by the committee worthy, shall receive a medal, valued at $5."